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WALKS AND TALKS ON THE FARM.—NO. 19.

JOHN JOHNSTON wrote us to-day, (June 8th,) that winter wheat and winter barley are both good crops this year in his neighborhood, though not so early as he anticipated a month ago. He says:

"I did last year what I never did before; that was plowing up wheat stubble and sowing again with wheat. It is a respectable looking crop now, but if you saw the half of the field that I sowed salt on, say a full barrel to the acre, I am almost sure you would order forty or fifty barrels of second quality salt to sow in September or October. The salted wheat stands much thicker on the ground, is considerably taller, came in ear fully four days before the other, and altogether looks richer every way; and as I had not salt enough to sow the whole field, I sowed the half that has hitherto brought the worst crop and latest in ripening. Now it is much the best. I can stand in the middle of the field and look forty-five rods each way and see distinctly how far the salt came, or I can walk or ride down the side of the field where not salted, and see the line as plainly as if the one side was corn and the other wheat. If this won't make men experiment with salt, I don't know what will.

"My great crop this season is winter barley. It is my first crop of that kind, and if it don't get laid it is as good as any man could wish to see. It is now beginning to get yellow for the harvest. It was sown I think on the 11th and 12th of September, the field thoroughly summer-fallowed, rolled after the drill, and full one barrel of salt sown to the acre. I never saw such a crop. My neighbor, Mr. Noyes, has also a very good crop, but I have not been to it; still should we have heavy showers, mine might be greatly damaged, as it is both too thick and too tall. I guess it stands about four and a half feet high, or nearly. I sowed two bushels to the acre, but I am sure one and a half bushels would have been enough. We need rain here very much for spring crops. There was heavy rain and hail some three miles from here yesterday. If you lack faith in salt, I want you to try one barrel on an acre of wheat, *on dry land*. If it don't pay, charge the cost of the salt to me."

I will buy a barrel or two this fall, but I have not much faith in the efficacy of salt, except on rich land—and unfortunately my farm does not exactly belong to that class. What I want is ammonia and phosphoric acid. Salt will supply neither. Give me the former first and then the latter may be of use. Mr. Johnston has been applying them to his land for years, in the shape of rich manure made from clover and oilcake. My land never saw or heard or smelled a bushel of oilcake since it was cleaned of the original forest forty years ago. "Why sir," said an old resident a few days since, "one year Tom ——— set three of us to mow that meadow you have been draining. It had been sheeped to death. Tom was a great hand for sheep. He thought he could make the land rich by keeping sheep. They were half starved and ground everything into the ground. We did not want to cut the grass,—it was so poor. The spears were about a foot apart and the scythes had to be very sharp to cut it at all. But Tom would have it mowed. We worked hard all day and at night we could have carried home on our backs all that we had cut."

There may be land on my farm that needs salt to check over-luxurience, but as yet I have not discovered it. It is true that land which has been water-logged for years is usually quite productive after it is drained, and it is very probable that salt might be used on such land. But my dry upland needs several years good culture and high manuring before I shall expect much benefit from salt.

My peas are splendid—the best I have seen anywhere. I sowed Lawes' wheat manure on half of them and Tasker & Clark's superphosphate on the other half. I intended to have put a barrel per acre, but the men only got on eight barrels on the ten acres. This is not quite enough, but I am mistaken if I do not have a big crop—big enough to check, if not to smother the thistles. I intended to have summer-fallowed the field, but the Deacon persuaded me to sow peas and sow wheat afterwards in the

fall. He thought the land had been "sun-burnt" quite enough. Now what I want is a horse hoe, for hoeing wheat in the spring, and you smile, but such machines have been used in England for many years. The wheat can be hoed with them for twenty-five cents an acre. If the season is favorable, the wheat is gone over two or three times and the land is as clean as possible. They say that there is comparatively little advantage in drilling-in wheat unless you hoe it afterwards. Be this as it may, there can be no doubt that drilling and hoeing would be one of the greatest improvements that could be introduced into this section. On many farms red-root half chokes the wheat, and thistles are not rare. We could destroy the red-root and other weeds easily by hoeing, and the thistles, if not killed, would be so checked as to do little damage.

There was a gentleman from Herkimer county here a few days ago, and he went into extacies over our cherry trees, loaded with fruit. He says that the cherry trees in his section are affected with a knot similar to the black knot on plum trees. He thought the land, too, was "beautiful"—so free from stones, so clean and so easy to work. "You beat us altogether in grain and fruit," he said, "but we can beat you in cheese." I told him that every section had its advantages and disadvantages, and it would be a blessing if people would only realize it, and not be so anxious to leave the location where Providence had cast their lot.

He spoke in praise of the "cheese pastures—of the superior quality of the cheese, and of the saving of labor in the farmers' families."

I told him that several years ago I visited Herkimer county, for the purpose of studying the system of cheese making, and was delighted with the labor saving appliances there introduced. With their vats for raising the temperature of the milk to any desired point and for separating the curd from the whey, and their easily worked and powerful presses, I thought cheese making, as compared with the old fashioned process, was nothing but a pleasant pastime.

I put on a good top-dressing of manure last fall on half a field of grass land intended for corn. I have just been over the field and am astonished at the effect the manure has on the corn. It is much the poorest part of the field, but the corn is far better.

I was telling you about the Potato Planter. The potatoes come up better than expected. I am satisfied that it is a useful machine. I made one mistake. Mr. True came up here to show me how to work the machine. This was on the 21st of April. The land was somewhat wet, and the roller for covering the seed clogged a little. Then again I was not sure that the machine planted them with sufficient regularity. My man agreed that the old fashioned way was the best. This was to be expected, but Mr. True himself thought the potatoes were not of the right size and shape and felt doubtful as to the result. I planted two rows and gave it up till I could get the right kind of seed. Other matters were pressing, and it was ten days before I got at it again. I have not the least doubt that it would have been fifty dollars in my pocket had I kept on. These two rows came up as well as could be desired and are now looking splendidly. Every time I look at them I am reminded of the advantages of *getting crops in early*. It frequently makes all the difference between a good and poor crop—in other words, between one that affords a fair profit and one that involves a loss.

We had a tremendous shower yesterday, (June 19th.) It only lasted about an hour, but I think over an inch of rain must have fallen. A few hours afterwards I went to see how my main under-drain, with five inch pipes, got along. The water came through in a torrent. It is over a thousand feet long, with a fall of about three feet, and it was "fun" to see the water rush out of it and strike the opposite side of the open ditch. It enters the open ditch nearly at right angles, which is a mistake; it ought to enter it more obliquely, as such a force of water will be likely to wash away the bank.

An inch of rain gives about 22,500 gallons of water per acre. I calculated to drain over twenty acres of land with this five-inch main drain. But will it do it? There must have fallen yesterday in *one hour* on this twenty-five acres over *half a million* gallons of water. I suppose a five-inch pipe, with say six inch fall in a hundred feet, would discharge, with the ordinary irregularities in laying, not more than one hundred and seventy-five thousand gallons in twenty-four hours. Accordingly it would take three days to carry off the water that fell in one hour.

In England a five-inch pipe is ordinarily quite large enough, as a main drain, for twenty-five or thirty acres. But then they never have such heavy showers as we do here, and as nearly all our facts in regard to under-draining are derived from the experience of English farmers. We shall have to experiment for ourselves before we can proceed with any degree of certainty.

One thing seems clear: that we are liable to fall into the error of laying larger tiles than are necessary for the sub-drains, while we do not use tiles of sufficient size to carry off the water in the main drains.

John J. Thomas, in *Rural Affairs*, goes into a cal-

culation to show the size of tiles necessary to drain land. He says:

"It is necessary, first, to ascertain the amount of surplus water existing in an acre of soil, at the wettest period. This will vary considerably with the nature and depth of the soil, but it may be laid down as a general rule that the soil and subsoil down to the depth reached by drains, when heavily saturated with water, contains a needless quantity, at least equal to a depth of three inches over the whole surface, which would be more than one thousand hogsheads per acre. The drains should be of such a magnitude as to carry this off in twenty-four hours. If each drain relieves a space of a rod on each side, or a strip of land two rods wide, it must be eighty rods long for an acre of this breadth, and carry off forty-two hogsheads every hour, forty-six gallons per minute, or three-fourths of a gallon per second. A tubular tile, two inches in diameter, and perfectly smooth and straight, would accomplish this if it had a descent of one foot in twenty. With ordinary imperfections, it would require a descent of about one foot in ten or twelve. If the descent was only one foot in fifty, it would require a three-inch bore.

"The size of the drain is controlled by three causes: its rate of descent, its length, and the number of branches it receives. The length and number of branches may be included together, for three branches, each ten rods long, would be the same as a single channel thirty rods long. In all estimates, therefore, the aggregate length of the branches may be taken as that of a single drain; and the area they cover will readily show how much water is to be carried off, allowing, as before, one thousand hogsheads per acre. By the use of the following table, which the writer of this article has calculated for this purpose, and which is sufficiently accurate for ordinary use, the size of the bore for different areas and slopes may be readily determined. A deduction of one-third to one-half must however be made for imperfections in the tile and laying.

Diameter of Bore.		Rate of Descent.		Velocity of Current per Second.		Hogsheads discharged in 24 hours
2 inches.	1 foot in	100		22 inches.		400
"	"	50		32	"	560
"	"	20		51	"	900
"	"	10		73	"	1290
3 inches.	"	100		27	"	1170
"	"	50		38	"	1640
"	"	20		67	"	3100
"	"	10		84	"	3600
4 inches.	"	100		32	"	2500
"	"	50		45	"	3500
"	"	20		72	"	5600
"	"	10		100	"	7800

"For very short drains the preceding table would not answer, as it requires some length to give the water its full velocity."

It is probably true that land "being saturated with water" contains an excess equal to three inches. But this would only be the case when the drains are first cut. After they were once fairly in operation the land would never be saturated to this extent.

The only experiments I am acquainted with bearing on this subject, are those made by J. Bailey Denton, on the Hinxworth estate, containing 800 acres. The land had been drained with bushes laid at close intervals, and from fifteen to eighteen inches deep, but the land still suffered from excessive wetness. It was determined to drain it thoroughly in tiles.

The mixed open soils were drained by occasional and wide parallel drains (from four to eight feet deep) "sufficient to discharge the rainfall and relieve the pressure of subterranean water passing through the soil from the higher grounds to their natural outfalls. The cost from eight to eighteen dollars per acre. On the clay land the drains were put twenty-five to twenty-seven feet apart, four feet deep, at a cost of from thirty to thirty-five dollars per acre. The object of putting them so close was to aereate the soil as well as to drain it. The total cost of draining the eight hundred acres was $16,785, or about twenty dollars per acre.

A record was kept of the fall of rain and of the amount of water which was discharged from the different drains, every day for a journal for eight months, (October 1st to May 31st.) During this time the rain guage showed that 227,240 gallons of water fell on each acre. During the same time, the drains on the free soil, and where there were comparatively few required, discharged 160,920 gallons per acre; while the quantity from the more numerous drains on the clays, was only 59,936 gallons per acre.

There was a fall of rain in October and November, of 3,275 inches, equal to a supply of 74,087 gallons per acre. The drains first commenced to treble on the 27th of November, after a fall of half an inch of rain. The test-holes (placed midway between the drains) showed that the soil was rapidly feeding itself and that the water level was rising, but had not reached the level of the drains. In the first part of December there were frequent rains, but not amounting up to the 12th, in all to one-tenth of an inch. On the 12th the drains were discharging one hundred and sixty gallons per day per acre. On the 13th there was a fall of rain of half an inch, and the outlets increased their discharge from one hundred and sixty to nine hundred and seventy-five gallons per drain per acre. In January, after more rain, the drains discharged 5,150 gallons per day per acre.

You see it took over three inches of rain in the

autumn to start the drains. Then, after that, the drains discharged in proportion to the rain fall. But the total discharge of water was only equal to about *half the quantity of water which fell on the surface.* I suppose the other half was evaporated. But the fact that the drains discharged over one thousand gallons of water per day per acre during the winter, shows how wet the land would have been without them.

I hear that the rust and midge are seriously injuring the wheat in Wheatland and Caledonia. This moist weather, however favorable for spring crops, is not good for wheat. We want dry, hot weather for its elaboration. I have not yet been able to discover any midge maggots in my wheat, but I presume I shall not escape, though I sowed "weavel proof" wheat.

THE MACHINE UNIVERSAL.

This machine existed at an early day in the world's history,—at a time when machinists were few. Still, it ranks among the first in importance, and, of all, it is the most worthy of consideration. Its record was traced in its origin by Adam, its first engineer. Then it existed in a rude state; its parts were imperfect, and not understood; experience and practice in its operations were required to give it the importance and perfection since attained. Its design is the result of no mechanical genius, although it has received the life study of the most eminent minds of all ages of the world. Napoleon viewed it with admiration. Washington saw and pronounced it *good.* By it man grows and nations prosper! It is the Republic's pride and strength in time of peace, and safeguard and security in time of war. Without its power this nation would be insignificant and powerless, a body without sustenance, a branch without support.

This important and powerful machine is the *Farm;* the farmer is the engineer. The machinery is complex, and requires the constant exercise of forethought, care and vigilance, to run it with profit. Like other machines, it is subject to wear in its operations; accidents happen to it; a screw becomes loose, a wheel, cog, or bolt, may break, any of which might suspend the motion of the whole. Particular care should be taken to keep this machine in good working condition, to which end the *lubricating material* should be properly applied, with first-class conductors and operators, such as proper training, study and experience will make, and the Machine Universal will never prove a failure, but a source of profit and enjoyment to the farmer, a means of wealth and prosperity to the people, and a blessing inestimable to the world.—I. W. Sanborn, in *Boston Cultivator.*

COOL WATER.

At this season of the year a cool draught of water is a luxury which we may enjoy with a little care. By the following method, simple and inexpensive, water may be kept almost as cold as ice. Let the jar, pitcher, or vessel used for water, be surrounded with one or more folds of coarse cotton, to be constantly wet; the evaporation of the water will carry off the heat from the inside, and reduce it to a low temperature. In India and other tropical countries, where ice cannot be procured, this expedient is common. Let every mechanic and laborer have at the place of his work two pitchers thus provided, and with lids or covers, one to contain fresh water for the evaporation, and he can always have a supply of cold water in warm weather. Any person may test this by dipping a finger in water and holding it in the air on a warm day; after doing this three or four times, he will find his finger uncomfortably cool. This plan will save the bill for ice, besides being more healthful. The free use of ice water often produces derangement of the internal organs, which, we conceive, is due to a property of the water independent of its coldness.—*Maine Farmer.*

Basement Stables.—A correspondent of the *Country Gentleman* in reply to an inquiry in relation to the healthiness of basement stables, says: "I have generally kept from fourteen to sixteen head of cattle in the basement of my barn, with from three to four horses, for twenty years past. The horses are kept up the year round; the cows I generally turn out in the yard in front of the barn, when the days are pleasant. The stables are regularly cleaned every day, and well littered. A more healthy lot of stock I have never known, for I have not had a sick cow or horse since I have used these stables. I certainly like basement stables—they are warm and comfortable in winter, and cool and pleasant in summer."

Cure for Scab in Sheep.—Daniel Kelly, Esq., of Du Page county, gives in the *Prairie Farmer,* the following as his remedy for this troublesome disease. He thinks it a sure cure. One pound of mercurial ointment, and three pounds fresh lard, well mixed together. Turn the sheep upon its back and anoint the bare spot under each leg, and also around each place where the "scab" has appeared. Keep the subject from the weather for a few days.

Care of Goslings.—On the first day after the goslings are hatched, they may be left out, if the weather be warm, care being taken not to let them be exposed to the unshaded heat of the sun, which might kill them. For food, grain is prepared with some barley or Indian meal, coarsely ground, bran, and raspings of bread, which are still better, if soaked and boiled in milk, or lettuce leaves and crusts of bread boiled in milk.—*Browne.*

RANDOM TALK ABOUT HENS.

WRITTEN FOR THE GENESEE FARMER BY C. N. BEMENT.

TO HAVE THE POULTRY-YARD PROFITABLE,

The hens should not be kept until they are old; hens after three years, will not produce as many eggs as those of one or two years; much, however, is depending on the breed kept so far as good layers are concerned. There is considerable difference in the number of eggs that the different breeds will lay, as well as the chickens of each breed. Some hens will lay an egg every day, others one every other day, and others every third day.

HENS IN THEIR FIRST YEAR,

if early birds, will probably lay as many eggs as ever after in the year; but the eggs are small, and such young hens are generally unsteady sitters and cannot be depended upon as incubators.

BEST FOWLS FOR COMMON USE

are a cross of the Asiatic or Dorkings with the common barn-yard fowls. If you wish your hens to do well and lay well, keep a middling sized cock, if the object be eggs; but on no account, keep a large or overgrown one. If you want to raise chickens for the table or for the market get the half-blood Asiatic, or Yellow-legged Dominique breed.

SHELTER.

Fowls should always be kept in a dry, warm sheltered situation—a southern aspect is to be preferred—for they enjoy and benefit generally by the "warms in the sun," as well as requiring protection from its scorching rays, and a secure shed for rainy weather. The roosting-house and laying-house, if separate, should communicate, that early layers may have early access to the nests, and also communicate with the storm-shed for the fowls to run in, in security if they should leave their roosts early in the morning. The nests should be numerous, if in boxes, not too deep but roomy, some situated high, some low, scattered around and as independent of each other as possible, each supplied with sweet soft straw, and a glass or porcelain nest egg. If the nests be too deep they break the eggs in jumping in and out, and if the nests are not roomy sitting hens have no room to turn easily, and consequently break the eggs by not being able to get to them softly. They then eat the broken eggs, which gives them the habit of doing so at other times.

THE FEEDING PLACES,

if under cover, so much the better, as a precaution for wet weather, and as far as possible removed from the nests, that the hens which happen to be laying at the time or which may be sitting, may not be disturbed and enticed off their nests and eggs at improper times.

WINTER LAYERS.

In order to have hens lay in winter—the season when eggs are scarce and sell at the highest prices—it is necessary to furnish them with warm, dry quarters, well lighted and well ventilated, and strictly clean; feed them all they will eat on boiled potatoes, mashed and mixed with meal, middlings or shorts in the morning, and corn, barley or buckwheat at evening—they are fond of variety. In feeding on potatoes alone without grain they are apt to make them scour; and we have found it indispensable not only to feed them in a boiled state; not *too hot*, however, as they are so stupid as to burn their mouths if permitted.

AS A GENERAL RULE,

April is the best month for eggs and December the poorest. If many early spring pullets are kept the yield of October, November and December will be much increased.

HENS SHOULD NOT BE KEPT UNTIL THEY ARE OLD;

after three or four years they should "go to pot." There is no objection to preserving a favorite cock so long as he is active and lively; but hens after three years will not produce as many eggs as those of one or two years. Much, however, is depending on the breed kept, but more on the manner in which they are kept, so far as good layers are concerned.

THOUGH HENS SHOULD BE KEPT WARM IN WINTER,

they should not be crowded together in small or contracted apartments, as without ventillation they are liable to disease from impure air. In mild weather, when the ground is bare, they should be allowed to go out in the sun. Give them ashes or any dry loam to roll in; it will tend to keep them free from vermin.

COMPLAINTS

are often made by persons who wish to keep fowls, but are unable to do so because they cannot keep them out of their gardens. No such difficulty can be laid to the Cochin-Creepers. In character they are quite peaceable, very tame, and for domestic habits they are unexceptionable.

EXCELLENCE.

If we should be asked what are the points of excellence desirable in fowls, we should say, they should be large, quick of growth, hardy, quiet, fit for the table at an early age, meaty, abundant layers, especially in winter, good mothers, good tempered and quiet in their habits.

HENS SHOULD BE TREATED GENTLY.

Hens that are perfectly tame will lay many more eggs—some say twice as many as wilder ones. If you keep hens for the eggs only, the Spanish, Polands, Hamburghs, Leghorns, and Bolton Greys, will

be found better layers than the larger breeds. But for early or winter layers the Brahmas and Cochin-Creepers—in fact, most of the Asiatic breeds—are considered the best.

HENS WELL FED IN THE FALL

are the best layers, as much depends on their condition. If pullets are left to run at large in the fall and not fed well, they will not lay as early, nor so many eggs, nor will the eggs be as rich in quality

CHICKENS FROM ASIATIC FOWLS

are more hardy and much easier raised than any of the smaller kinds. They grow much faster, and if well taken care of will commence laying at the age of five or six months; sometimes at four months. They should be hatched in March or April and then your pullets will commence laying in the fall and continue through the winter if well taken care of. Chickens, if raised for market, it is best to have them early, and it is important that they should be nicely dressed if we would get a good price. Chickens that are carefully dressed and nicely put up, will often bring nearly twice as much as others that are really good, carelessly and slovenly dressed.

Poultry, it is generally thought, ought always to be confined, but if so, instead of a dark, close, diminutive hovel, and a 7 by 9 yard, as is often the case, they should have a spacious, airy, light place constructed for them. In both large and small establishments, it will be necessary to separate some fowls from the rest, when particular breeds are to be raised. Separate pens or wards must be provided either at some distance from each other, which is preferred, or with divisions to prevent any intrusion, by which improper crossing might be produced.

CLEANLINESS.

Fowls being cleanly by nature, thrive when regularly attended, but degenerate and sicken if neglected. In an artificial state of existence, they require to be supplied by art which in nature they would attain for themselves. For this purpose they should have a regular supply in some convenient part of their shed, of sifted ashes daily to bathe and roll in, and to cleanse themselves, and which should be often changed. This precaution will keep them entirely free from vermin of any description.

FOWLS ARE GRAZIERS.

Green food being quite as necessary for health as corn or any kind of grain; to supply this requirement of nature, they should have daily a good supply of fresh green vegetables. Among the plants they reject are the leaves of strawberries, celery, parsneps, carrots, and potato leaves. They are most fond of cabbage, lettuce, turnip-tops and water-cresses; but on no account any sour plants which scour them, as do spinach, the cuttings of grass-plats. Green food with fowls is an astringent, the very reverse of what vegetables are with us. That fact will not appear so surprising, when it is recollected that one takes them raw and the other cooked. It is unnatural; they have no good cooks amongst them in their own state; and it is decidedly injurious to their digestive organs, except when they are doomed soon to be killed for the table.

Poughkeepsie, June, 1865.

NOTES BY S. W.

THE Waterloo Races and Horse Fair came off on Wright's Course the two last days of May. De Balsac says, him who needs no exciting recreation is either a bigoted ascetic, or a slave to some devouring passion. I once heard of a *soi disant* Quaker, who would not eat streaked beans lest he should minister to the vanity of the creature. The great improvement in horse flesh in this region of late, has been remarked by many former residents, who lived here during the day of small things. Lloyd Minturn has done something for the improvement of the breed of horses by his importations from Vermont. But Joseph Wright is emphatically the empresario in equine stock in this region of country, and the good effects of his labors may well absolve him from the folly of quitting tobacco growing just as it was most profitable, because he wanted the large sheds to turn into stables for his hundred and fifty horses, brood mares, colts, &c.

THE SEASON AND THE CROPS.

The winter wheat crop never promised better, grass two weeks earlier this season than last; yet, you will hear scores of farmers complain of the season—too cold and wet at first, and now too hot and dry. But while it is so dry that the late planted corn cannot come up, that planted in early May is luxuriating in the hot dry weather. Blessed is that farmer who does not rely on the season to give him a crop planted out of season. Ask such a man if his crops do not suffer from the cool wet weather, and he will say he has provided against such weather by under-draining. Ask him now, if his corn does not suffer from drouht, and he will laugh at your simplicity. The man who plants in early May, has no more labor to perform to get a large crop, than him who plants in June has to get a small one. When a mechanic neglects or botches at his trade, his customers desert him and he is compelled to try some other business for support; but the farmer may neglect his calling with comparative impunity, as he can easily grow enough to make his own pork, and bread and butter; so that if he has nothing to sell he will not starve; and thus far he has escaped war taxes, and corporation taxes are among the realities which do not reach him.

A PLEA FOR SORGHUM.

Your remarks in favor of beets for sugar making, because the refuse feeds cattle and makes manure, will apply equally as well to the Chinese cane, its top and luxurious leaves are more eagerly devoured by milch cows than beets, even before their juices are pressed and the leaves of beets contain but little dry matter; then the bergass from the pressed cane may be used in the compost heap or as bedding for cattle. Beets require as strong a soil for a maximum yield as sorghum, although the latter may exhaust the soil more, but as its cereal crop is small it cannot destroy manure like Indian corn.

SURFACE MANURING.

John Johnston says that "one load of manure used in top dressing is worth two loads plowed under on stiff land." It is humiliating to be obliged to demur to the dictum of so successful a veteran in farming as Mr. J. But I have always found in my small experiments, that working in coarse unfermented manure to a clay soil, was the best way to make it both rich and friable. Concentrated manure is as much less permanent as it is quicker in its action; but that which is plowed under has not only a better mechanical effect, but its chemical aid is developed the second season if not the first. Yet on a light friable soil, top dressing with well rotted manure may be the most economical amendment. But I presume Mr. J. will say that his remarks are meant to apply to the top dressing of his wheat fallow with the well rotted manure from his farm yard. Here the mechanical effect of the manure prevents the freezing out of the wheat in winter and early spring, and the growing crop is immediately fed by the decomposed manure. But as Indian corn only grows in hot weather the decomposition of coarse manure begins *pari passu* with the growth of the crop, and when the ears are filling the final decomposition of the manure now perfects the crop.

OLD SEED.

One great objection to seed from the seed stores is the doubtful age of the seed; the newer the seed the quicker it will vegetate and the stronger will be the plants. When I bought my onion seed from the shop, the seeds that did vegetate were a long time in the ground, and the plants were weak.

ON ONION GROWING.

Our most successful market gardener never grows onion setts by themselves; he sows them thick in early spring in rows twelve inches a part, and sows the small ones for setts the next spring. He keeps out every weed, but he never thins out the onions. It is a great mistake to sow onions in August to grow setts for spring planting, as onions require cool, moist, spring weather on the start. They must have roots deep in the soil to enable them to grow in hot weather. I have seen onions grow on top of each other, the roots of the upper one having to pass between the onions below to reach the ground; but this was on a soil manured and managed just right, too much manure is the cause of much failure in onion growing, as it induces the plant to run to top, and scullions are the result. On the drift formations near the sea the onion bed can rarely be made too rich; but over dosing with manure and late planting, is the cause of failure on the generous alluvions of Western New York.

Waterloo, June 14th, 1865.

FOOT ROT IN SHEEP.

PERMIT me, through the *Farmer*, to tender my thanks to Mr. J. D. Kirkpatrick, of North Liberty, Pa. He offered, through the *Farmer*, to send (free) a recipe for curing foot rot in sheep to those who desired it. I wrote to him, and he kindly sent me the directions. I consider his plan the best I know of. I will give it briefly, for the benefit of sheep-raisers:

Pare the hoof well, taking all the loose horn off. Put butter of antimony on the sore first, then ordinary blue vitriol, dissolved in water; then tie up the foot with a rag, to keep dirt out of the sore; keep the sore foot from the ground, and repeat this operation once or twice a week, and I will guarantee a cure for the worst cases. The ordinary blue vitriol will do for common cases. The difficulty is, where the cavity in the foot is put bare on the ground, even after the disorder has been removed, dirt works up into the cavity, and irritation and soreness ensue again.

Do any of the readers of the *Farmer* know a sure, harmless remedy for ring-bone in horses?

HORATIO G. LAWRENCE.

Flat Brook, Columbia Co., N. Y., 1865.

A PROLIFIC PIG STORY.—The first of April, 1864, a female swine under the barn of Edward Earl, in Worcester, had a litter of thirteen pigs, eleven of which, when six weeks old, sold for $14. In August following, the same animal had thirteen more, and raised nine of them, which sold for $45. The 24th of February, 1865, to cap the climax, she brought forth seventeen more fine, healthy pigs, (although she had only twelve teats for them,) making in all three litters, within thirteen months, of forty-three pigs.—*Worcester Transcript.*

TO STOP CHIPMUCKS PULLING CORN.—"S. M. T." says his neighbors "soak their corn in a decoction of tobacco, and it has invariably put a stop to the depredations of the Chipmucks."—*Am. Ag.*

A CHEAP AND VALUABLE PAINT.

ONE of our neighbors has painted his out-houses, fences, &c., with a paint made as follows, and found it nearly as good as ordinary oil paint and vastly cheaper. In fact the cost is scarcely anything except the labor:

"Take half a bushel of nice unslacked lime; slack it with boiling water, cover it during the process to keep in the steam, and add to it a peck of clean salt, previously well dissolved in warm water; three pounds of ground rice, boiled to a thin paste, and stirred in boiling hot; half a pound of clean glue, which has been previously dissolved by first soaking it well, and then hanging it over a slow fire, in a small kettle within a large one filled with water. Add five gallons of hot water to the whole mixture; stir it well, and let it stand a few days covered from the dirt. It should be put on right hot; for this purpose, it can be kept in a kettle on a portable furnace. It is said that about one pint of this mixture will cover a square yard upon the outside of a house, if properly applied.

"Brushes more or less small may be used according to the neatness of the job required. It answers as well as oil paint for wood, brick or stone, and is cheaper. It retains its brilliancy for many years. There is nothing of the kind that will compare with it, either for inside or outside walls. Coloring matter may be put in, and made of any shade you like.

"Spanish-brown stirred in will make red or pink more or less deep, according to the quantity. A delicate tinge of this is very pretty for inside walls. Finely pulverised common clay, well mixed with Spanish-brown before it is stirred into the mixture, makes a lilac color. Lamp-black in moderate quantities makes a slate color, very suitable for the outside of buildings. Lamp-black and Spanish-brown mixed together produce a reddish stone color. Yellow ochre stirred in makes a yellow wash; but chrome goes farther, and makes a color generally esteemed prettier. In all these cases, the darkness of the shade will of course be determined by the quantity of coloring used. It is difficult to make a rule, because tastes are very different; it would be best to try experiments on a shingle, and let it dry. We have been told that green must not be mixed with lime. The lime destroys the color, and the color has an effect on the whitewash, which makes it crack and peal.

"When walls have been badly-smoked, and when you wish to have them a clean white, it is well to squeeze indigo plentifully through a bag into the water you use, before it is stirred in the whole mixture.

"If a larger quantity than five gallons is wanted, the same proportions should be observed."

Our friend says that thirty cents worth of coloring matter will be enough for the half bushel of lime. Spanish-brown, yellow ochre, cost three cents a pound. Lamp-black and Princes brown five cents a pound. The latter gives a handsome lilac shade.

UNDERDRAINING WITH RAILS OR POLES.

EDS. GENESEE FARMER:—Your remark in the June number of the *Genesee Farmer* that "for narrow drains, tiles must be used," I have put in some under-drains fifteen inches wide at the top and three inches wide at the bottom. In such a ditch you would say tile must be used. I have used wood for tile, not to have the water run through the wood, but under. The ditch should be not less than three feet deep. I make use of a pole or rail of the size that will go down to within five or six inches of the bottom of the ditch. Lay it in to the ditch; then tread it down so that it will set close to the sides of the ditch in order to prevent the dirt passing by it into the space below. Then fill up the ditch and you have a drain that will carry off the water as well and as long as a tile drain. Narrow drains cannot be made through coarse gravel or stony ground. On such ground a ditch wide enough to work in will have to be made. Then stone or tile will have to be used.

In making narrow drains one spade should be fourteen inches long in the blade, five inches wide at the top and three at the lower end, and made a little flaring. The handle should be four feet long, so that you can stand on the top of the bank and take the earth from the bottom. For cleaning out the bottom of the ditch use a piece of sheet iron, bent so as to make a scoop, that will go into the bottom of the ditch and clean out all loose dirt, with a handle four or five feet long attached to it. Such a tool any farmer can make. A drain as above described can be put in for one half the expense of a stone or tile drain made wider. Water can be made to pass off as well *through* the soil as on top of it, and the farmer that gives it a fair trial will find himself well compensated for the labor expended.

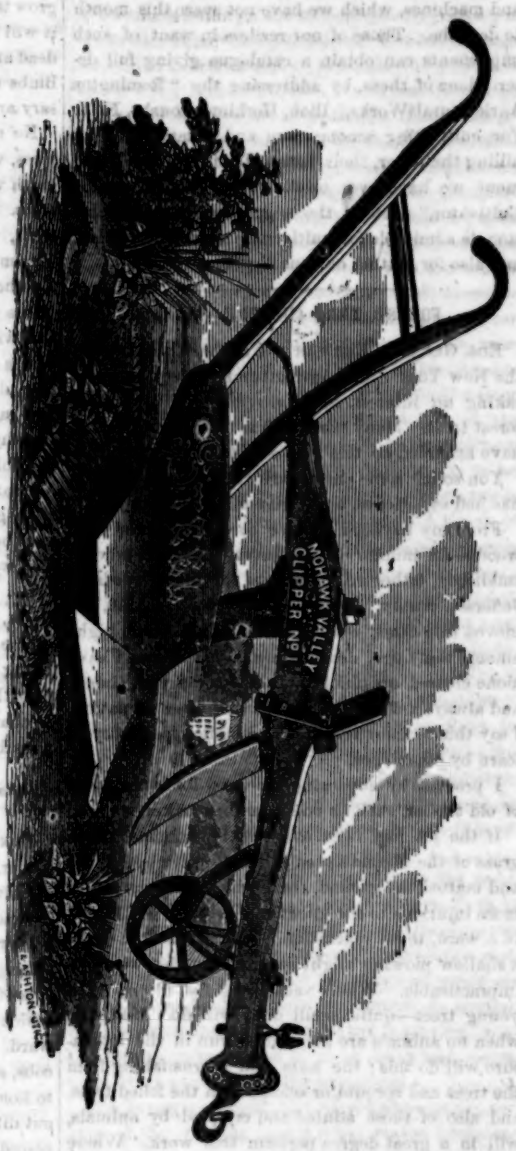
JOHN MCVEAN.

Wheatland, Monroe County, N. Y., June, 1865

PLOWING AMONG TREES.—In plowing among trees, and where it is desired to throw the furrow *from* the row, a plow with a movable beam, and set as "wide" as possible, enables one to plow much closer to the trees. When it is desired to throw the furrow towards the trees, the same plan is equally advantageous, but of course it should then be set as *narrow* as possible—*i. e.*, the beam should be turned to the left.

AGRICULTURAL IMPLEMENTS AND MACHINES.

We propose to give from month to month some account of the many valuable implements and machines now offered to farmers, and the manufacture of which forms such a striking feature in American agriculture. Great as have been the improvements which have been made during the last ten or fifteen years, we believe they are nothing in comparison to what we shall witness in the new era of American agriculture on which we are about to enter. The immense and fertile territory now open to Northern enterprize will require ten times the number of implements and machines for its cultivation than those hitherto used, while the abstracion of so much labor from other sections will compel us to resort more than ever to all useful mechanical appliances for the cultivation of the soil and the gathering of the crops. We are sure that under such circumstances one or two pages of the *Farmer* each month devoted to a description of useful implements and machines will prove of great interest to our readers. We shall endeavor to give illustrations of all the new inventions that promise to be valuable, but at the same time shall not neglect those which have been for some time before the public and which merit a more general introduction. We propose to commence the series with some account of a few of the implements manufactured at the Remington Agricultural Works at Ilion, Herkimer county, N. Y. We have used many of the implements made at their works and can confidently recommend them to our readers.



Steel Plows.—That steel plows are destined to be more extensively used is certain. They have many advantages over cast iron plows, such as keeping bright, cutting a clean furrow and running easier. John Johnston, of Geneva, writes:

"I did not get your Steel Plow tried until to-day. I assure you, I think it the best plow I ever owned; it runs deep enough and covers up all the stubbles finely. I fully expected that it would plow sward land excellently, but did not expect it so good for stubble—nothing can do better; and, like every good plow, is remarkably easy for both man and horses."

And again he writes, after three years experience: "I still think the Mohawk Valley Clipper the best plow I have ever used."

The only objection he has to the plow is that it is set to take too wide a furrow; but most farmers like a plow that will turn a wide furrow, and it may be said that this steel plow will turn a wide furrow easier than most plows will a narrow one. We understand that the Remington Agricultural Works are about to manufacture other patterns with steel mould-board, points, &c.

The Remington Agricultural Works also manufacture steel cultivators, horse hoes, steel toothed horse hay rake and many other valuable implements

and machines, which we have not space this month to describe. Those of our readers in want of such implements can obtain a catalogue giving full descriptions of them, by addressing the "Remington Agricultural Works," Ilion, Herkimer county, N. Y. For cultivating among corn and potatoes and for hilling the latter, their Horse Hoe is the best implement we have ever used. Then the "Johnston Cultivator," made at the suggestion of John Johnston, is admirable for cultivating corn on clay land, and also for getting out quack grass.

FOREST TREE CULTURE—NO. 1.

EDS. GENESEE FARMER:—I am well pleased that the New York State Agricultural Society is about taking an interest in preserving and protecting forest trees. Many parts of the older States should have attended to this vital subject long before this.

You solicit some one to write on this subject who has had experience, and I give mine cheerfully:

From my boyhood I have been acquainted with woods—an inmate of the forests. In 1800, when a small boy, father migrated into the dense woods of Jefferson county, now State of Ohio. In 1810, we moved into Stark county of the same State, right among the huge, dense forests. Since then I have alone cleared up plantations at five different times; and always a close observer and admirer of nature, I say this to show that I had ample opportunity to learn by experience.

I proceed by supposing the wood lot is composed of old timber, such an one as nature makes.

If the lot has been over-run by animals, much grass of the fibrous-rooted kind will have taken root and matted the ground, than which nothing can be more injurious to the growth of trees of all kinds; in a word, to all vegetation. To eradicate the grass a shallow plowing might do good, but this would be impracticable. Where vacancies exist fill up with young trees—quite small ones will do. However, when no animals are allowed to run in the lot nature will do this; the nuts and acorns falling from the trees and sprouts, or scions, from the felled trees, and also of those stinted and crippled by animals, will in a great degree perform this work. Where trees die or where decay manifests itself, remove them either for fuel or other use—fill up with young ones. Never cut a tree for fuel unless there are no dead or such as are not fit for lumber or buildings. By no means suffer animals, especially cattle, to intrude. Strong cattle will hurt or destroy sapplings three, four, and even five inches in diameter by bending them down.

Let the young trees stand in close proximity, as that will induce them to grow straight and taller; if too close, the weaker will decline and die, as they grow taller. And though they will prune themselves, it will be better to do this by hand and remove the dead and declining ones. This offal, with the fallen limbs of older trees, will afford fuel—quite a necessary article where timber is scarce.

No animals being admitted, the foliage of the trees, weeds and briars will form a covering on the earth very salutary for the growth of the younger trees. Briars and weeds with runners or branchy roots, will do no harm, but good, as they have a tendency to shade and thus mellow the ground. As the trees progress in growth, the weeds and briars will yield and die, and the trees will govern the whole surface to their advantage—the soil becomes mellow and congenial to their development. The decaying leaves will afford ample nutriment and supply all the elements for a vigorous and healthy forest. Observe how nature forms forests and follow its method.

I said before, that when a wood lot over-grown with grass a plowing might do good; but as this may be impracticable, a mulching of any material that would cover the ground well might do.

Let me say again, exclude all animals. Hogs, I think, would do no harm.

The forest once put in a healthy condition and by filling vacancies, will secure a continued vigorous growth, perhaps, as long as the earth may endure. A change of the varieties of trees may be indispensable after a long series of years.

A. BAER, JR.

Sodus, Mich., June, 1865.

CONTRIVANCE FOR HIVING BEES.—Mr. Amos Taber, of Albion, has left at our office, an apparatus for hiving bees, contrived and used by himself for several years with universal success. It consists of a board a foot wide and twelve feet long, elevated at an angle of about 45 degrees, the upper end of which is perforated with holes about two inches apart, into which long corn cobs are inserted, projecting downward. Bees when swarming, readily alight upon the cobs, as they afford an excellent opportunity for them to hold on upon, from which they can be hived without difficulty or danger, as the board can readily be placed immediately under the hive. A sample of the contrivance can be seen at this office, and we regard it as a simple and practical affair—one which every bee-keeper can make and use himself with little or no trouble.—*Maine Farmer.*

LICE ON HOGS.—The swine louse is readily destroyed by a strong decoction of quassia wood; tobacco water is also used, but requires especial caution in its application. A little benzine, dissolved in alcohol, applied with a shaving brush, or piece of sponge, is said to be a certain cure, but, like tobacco water, requires care in its use.—*Amer. Ag.*

AGRICULTURAL EDUCATION.

At a recent meeting of the Royal Agricultural Society of England, John C. Morton read a paper on agricultural education, in which he adduced some ideas that are well worthy of consideration.

To be a good and successful agriculturist, he said, needs not only familiarity with the ordinary routine of farm practice, and both industry and promptitude in its direction; it needs especially (1), the quality of patience by which her full share of the farm work is given to Nature to accomplish; and it needs especially, (2), the exercise of quick-sighted observation by which the earliest natural indications of what is going on, the earliest intimations of the natural tendency and movement whether to the good or bad, are detected in the living creatures which the farmer cultivates. Intelligence, activity, and promptitude in carrying out the routine of operations are necessary in every other business as well as that of farming; but none other, unless it too have equally to do with life, so needs the exercise of quick-sighted, careful, habitual observation for its successful prosecution—and in none other is there so much need of patience. I do not mean contentment, but a willingness and ability to wait for the full effect of the costless influences of Nature. A quick and watchful eye, and prompt activity at the proper time, have to be united with the faculty of waiting till the proper time in order to good agriculture.

Many an example, both mere incidents and whole lives, could be quoted in illustration of the need of both these qualities. Many of us have, I dare say, seen men of strong will—of course not bred to the business, or experience would have taught them better—tearing resolutely on in pursuit of the object which they had set themselves; regardless of weather, prejudices, habits; enforcing the material result by steam if horses would not do, by imported hands if the home-bred laborers were insufficient—in the end correcting at great loss their blunders, and confessing that the knot had been generally cut rather than untied—that difficulties had been swept out of the way rather than overcome, that the mere enemy, so to speak, and not the enmity had been conquered, and that the natural method by which men as well as mere material are converted, and by which things of themselves come round, hinging satisfactorily on the new element which may be introduced, is not only the cheapest but most efficient in the end. On the other hand of course it must be confessed that every neighborhood will furnish instances enough, and those too of men who have been bred to the business, where the natural method, as I have called it, has tended to listlessness and idleness, and ended in Nature not being *used* at all, but left almost altogether to herself.

These remarks have indicated and suggested rather than described the well-educated agriculturist. He needs, first, such a perfect and detailed acquaintance with the treatment of the soils, the plants, the animals which he cultivates, as experience, and in fact apprenticeship, can alone confer. And when you consider how many agencies he employs—working cattle, steam-power, laborers—what a magazine of mechanism there now is in agricultural machinery—on what a variety of soils, under what a variety of climates in this country he is placed—of how many plants and animals he needs to know the cultivation—how quickly in order to their successful management he needs to recognize and act on every aspect which they severally present under every variety of condition as to disease or health—how patiently, moreover, he has to deal with the living creatures which he thus has under his care, it must be plain to you that long and habitual practice and experience can alone confer the ability, or rather aptitude, which as a practical agriculturist he needs.

Then, as to the business arrangements which he has to conduct: there is the relationship to be maintained with the laborer, so that willing and intelligent services on one side may be secured by reasonable, firm and friendly bearing on the other; and there is the market skill, by which especially the right articles for purchase are selected, and also by which they are fairly bought and sold: and thus in the business of the farmer there is ample scope for judgment and resolution, for both decision and kindliness of character, and for a skill and promptitude which are to be acquired of course in full only by experience, but which are needed from the very beginning of his career.

Lastly, there is the light of science, in the midst of which he ought to walk—no longer a slave to mere routine, but a freed man, acting intelligently within the known limits imposed by Nature's laws—perceiving the scope and tendency of every act that he directs—able therefore himself to suggest the improvements of which his art is capable, or at any rate to judge aright of those helps and alterations which others may offer or suggest.

It is however undoubtedly significant—partly perhaps of the existing educational status prevalent amongst farmers, certainly of the fact that barely a single generation has yet passed away since so many scientific men have been laboring in the field of agriculture, and certainly also of the paramount importance of technical and commercial ability, that is of skill and shrewdness for success in farming—that while we have amongst us maxims which insist on the importance of knowing the details of the business both in the field and in the market, there are none that I know of which urge the value of scientific knowledge.

I have heard often enough that there is a "rent" difference between the words "go" and "come" in agriculture, so that the farmer hiring land who can show and teach his laborers how to do it, is as well off as the yeoman owning the land he cultivates, who depends upon a bailiff. And we often hear, too, of the rent of a farm being "picked up outside the fences," *i. e.* made by market ability. But there is no such maxim in assertion of the commercial value of an acquaintance with the agricultural relations of the sciences. The tendency is still the other way. More than once, for instance, I have overheard that "a farmer with a chemical head is sure to have an empty pocket." Of course such an idea has arisen from examples where the failure has been owing, not to a knowledge of chemistry, but to an ignorance of agriculture—examples, too, most probably where there has not been much greater knowledge of science than of practice.

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How can those faculties be best educated, that knowledge be best conferred, that skill be best acquired, which the farmer needs? Of course the boy must go to school, whatever may be his future occupation; and, no doubt, the discipline, both of school life and of school work—the habits, on the one hand of obedience and regularity, and on the other of perseverance and resolution which thus arise—together with the actual knowledge and ability acquired—remain with him through life to his great advantage, whether he is to be a farmer or not. I do not pretend to discuss the relative merits in these respects of the various plans of scholastic training which have been advocated. Their bearing on a future good manhood is, of course, a far higher subject than the one which occupies us now. I presume, however, that in this room we have to do not with good manhood, but with the much humbler subject of good agriculture; and the elementary schooling of the boy can have but little direct or special relationship to the ultimate profession of the farmer. But, even if this were otherwise, I should not suppose schools, especially for farmers' sons, or for those of their sons who are to be farmers, to be at all desirable. There, surely, is some advantage in boys of city and country origin, commingling in school life. Rather than have the sons of farmers educated as a class, it would be better they should go where the pecularities and self conceit of home life may be rubbed off; and some knowledge be acquired, from the beginning, that good sense and agreeable companionship exist in other professions as well as agriculture.

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On all these grounds it appears to me that elementary, general, and so-called middle-class education, is scarcely an agricultural subject at all; and the only remark I shall venture to make upon it, where it is intended as an introduction to the agricultural profession, is that an ordinary good school training affords perhaps less scope for encouraging habits of observation than is desirable in the education of a boy intended to be a farmer; and also (to put it solely on professional grounds), considering the international relations which now obtain amongst agriculturists, there is probably less attention generally paid to learning French and German than there ought to be. As to the former point I think it would be a useful supplement to the ordinary school exercises, if the study of Botany and Entomology were encouraged and directed from a pretty early age, and the practice of drawing from Nature taught. A boy who, besides acquiring a certain acquaintance with the features, the history, the habits and relations of certain plants and insects, has actually produced a series of drawings of both from Nature in every stage of growth from seed and egg respectively, must have gone through a very useful—agriculturally useful—training of his powers of observation.

I leave, however, the subject of mere school training and come to the question before us. And the first remark to be made is that *agricultural education to be perfect must begin early on a farm.* * *

I do not attempt to prove this by an induction of examples—for it is impossible to collect the ten thousand instances which would be necessary for this purpose—but the opinions of experienced men are the result of just such an induction, however unconsciously they may have been arrived at. And some such opinions I proceed to quote. The late John Smith, of Bowldown farm, near Tetbury, in Gloucestershire, farmed between 1760 and 1800. His annual journals and letters, which I have seen, prove him to have been a shrewd, intelligent, and leading man among the agriculturists of that time, and he enjoyed a correspondence with men in ranks much higher than his own. In a letter of his to Major Ogilvie, of Forfarshire, there occurs the following passage, which, however extravagantly worded, is, I think, worth quoting on this subject. He says simply enough:

"I never knew a learned man who was a good farmer, and therefore I never lamented the want of an education. The time of life to make men scholars is the time for observation in the farming line, and it rarely happens that a man can be a proficient in that business unless he be trained to it from his youth." This was written, let us recollect, long before the agricultural relations of the sciences had been worked out. He even adds: "I would take a man that can neither read nor write to make a

farmer sooner than I would the most learned man. The former has no knowledge but what comes from Nature, and of good natural parts. The latter prides himself upon his reading and his education, by which he thinks of pulling Nature out of her course, and so of outdoing everybody."

I quote this as the utterance of a shrewd, intelligent, and successful farmer, notwithstanding the utter absurdity and folly of which many will pronounce it guilty, simply because of the trustworthy good sound sense which I contend that it also displays. If I were addressing agricultural students, or felt in any degree responsible for their success in after life, as, if their teacher, I should be, I would not utter one word in praise of scientific instruction, if they were to infer from it that it could in any degree dispense with the absolute and paramount necessity of practical knowledge and skill, and of that long-continued patient observation of Nature and of practice from early years by which they can be best secured. But it is plain that the old farmer, however right he was to insist upon the need of a knowledge "that comes from Nature," could have known little of science, which he here refers to under the words "learning" and "education," if he supposed that its tendency was to make men try to put Nature out of its course, and so outdo everybody. Science, which teaches us the limits imposed by Nature, is, on the contrary, the guarantee of true modesty and humility.

I quote now a more modern example of a judgment on the point under discussion. The following story was told me long ago by the Rev. J. C. Clutterbuck, of Abingdon, and it has always seemed to me full of useful truth on the subject of agricultural education:

"A young man fresh from the University, who had taken cordially to the position of a country gentleman—and, among other occupations, had adopted that of agriculturist—was riding round his land one morning with a neighbor of long experience and well-proved practical ability and judgment as a farmer. He listened with docility and good-will to the instruction and advice that were given to him; and, struck by the wisdom and good sense of his companion's discourse, he at length exclaimed, 'Ah Mr. ——, I wish I knew as much as you do.' 'Make yourself perfectly easy on that score, my dear fellow,' was the reply—'You never will.' The one was fresh from the schools, and the other had spent all his life in the fields, and yet there was neither mock modesty in the speech of the one, nor arrogance in the answer of the other. Mr. —— did not finish his reply:—'I have been accustomed, he might have said, 'to be amongst plants and animals, constantly riding and walking on the soil which supports them both, since I was a child. Ever since I can remember I have had to do with the tillage of the land, the cultivation of crops, the management of live stock. There is not an aspect of weather, land, or life, so far as the live stock of the farm are concerned, which I have not habitually witnessed, realized and studied. That of which instances and striking cases may be observed by you is foreseen or recognized by me in its first beginnings almost as if by instinct. Long familiarity with the details of my occupation, beginning, too, with the mind of a child which has hardly any other impression on it to weaken the sensitiveness with which its early knowledge is received, gives me, almost unconsciously, and without the effort of any special attention such as you must exercise, those intimations of fitness or of unfitness, of quality and condition, whether of soil, or crop, or animal, on which the right direction of our business of course depends.' Mr. —— was perfectly correct; it is an immense advantage to an agriculturist, as to the follower of any other occupation, to learn that occupation young."

Take now the recently declared opinions on this subject of living men. One of the most intelligent and successful farmers in the West of England tells me:

"I left school myself before I was fourteen, and went at once to assist in every operation that might be going on, taking the milking pail morning and evening, seeing the cattle foddered properly, and lending a helping hand. I have never found a boy in the way after leaving school; and should quite despair of his making a man of business unless he had to mix with every thing that moved before he was sixteen or seventeen."

A North Lincolnshire farmer, who has had forty years' experience of the life of a tenant-farmer, and is well known and respected in his county, says:

"I attribute my success, under the good providence of God, in the first place to getting to know the practical part of farming in my youth, and following that up with tolerably industrious habits."

A leading Norfolk farmer says:

"I have not been unsuccessful, but I attribute that success in a great measure to the thorough practical knowledge obtained during apprenticeship."

An experienced Kentish farmer writes:

"My experience confirms the opinion that boys who begin early to learn the practical part of farming have great advantages over those even who are sixteen or seventeen before they leave schools." He adds:—"I invariably answer [requests for advice about the education of a boy who is to be a farmer] send the lad as near as you can to the place you

think he is likely to settle in as a farmer. Select the man who has the character of being the best farmer in his locality, and if you can find such a thing as a money-making farmer in the present day, get him to take him and treat him as one of his family."

Lastly, Mr. Clare Sewell Read, whose name is well known in this room, says:

"My individual experience is simply this: I was sent for six years years to a common commercial school at Norfolk, and when I was just fifteen I left school, and passed the next five years in learning farming at home. From twenty to twenty-eight I was engaged in managing farms and estates in various parts of the country, and I fancy in those eight years I gained more information, and a better knowledge of practical agriculture, than I should if I had passed my whole life in Norfolk."

And similar testimony to any extent could be quoted from every county in the kingdom—but, in deed it is not wanted, for surely it must be easy to convince a man that a sound agricultural education not only includes but *is* instruction in the art and business of agriculture.

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I venture to submit to those who are interested in this subject of agricultural education, that the young men whom they are anxious to equip aright for their agricultural career, have to gain their living by it; and that therefore the aim and end of agricultural education must be professional ability. I picture to myself the case of a young man with the £2,000 or £3,000 on which he is to depend as a farmer, well educated—guaranteed as such by all the distinctions that the universities can award him, a proficient even in the various sciences with which agriculture is directly connected—he must be upwards of twenty years of age. He is not yet a farmer, and taking him, as for the purpose of this argument I am entitled to do, to be an average specimen of human nature, I venture with some confidence to tell him that a thorough good farmer he never will be. For agriculture is an art and not a science, and the years he has spent till now on schooling chemistry, and botany, ought most of them to have been devoted to his apprenticeship to the business by which his £3,000 are to maintain him and his future family. A large and liberal education is, I know, (or, I should rather say, I have no doubt), an immeasurable benefit to any man; but it is simply mischievous and cruel—and will ultimately come to be so judged by the young man whose case I have supposed—to attach to the words "agricultural education," as a professional guidance for him and such as he is, any other than the simply professional meaning which they bear. I entirely agree, therefore, with the authorities already quoted, in insisting on the need of an early apprenticeship to farming as being the essential substance of an agricultural education.

The testimonies I have quoted are, however, mere extracts from fuller statements, and the writers would, I believe, all agree with me in adding a good deal to the bare assertion of such a truism as this; and perhaps the best way of making such additions will be to point out the difference between the Norfolk and Kentish farmer last quoted. The latter would send his boy into the district where he is ultimately to farm; Mr. Sewell Read would send him to a distance from home, and he attributes the chief advantage of his own agricultural education to its having been obtained in many different parts of the country. I believe in the latter statement, and the advice which it conveys, as the safer and the better of the two. And seeing that it is generally impossible to obtain in this way that wider experience which is desirable, it becomes the more necessary that the agricultural student should learn the inner truth which underlies the varying particulars and shades of agricultural and all other experience, so that the essence of every act that he directs, and of every fact that he observes, may be understood apart from the wrapping of mere circumstances which disguises it. This inner truth is the subject matter of scientific teaching. The sciences of dead and living matter—chemistry, botany, physiology, and others—thus certainly are part of a sound agricultural education, because they include and classify and thus truly represent the facts with which the farmer daily has to do. Any agriculturist who is also to a certain extent a botanist, a chemist, a physiologist, has his mind as well as his mere hands and eyes occupied with his business, and his judgment is surer, safer, and more confident in unusual or untried circumstances, not only because it acts upon this inner truth which circumstances disguise to the mere outward eye—but also because by larger exercise and freedom it has thus itself become an instrument of greater aptitude and power. I ought perhaps to beg pardon for occupying your time with truisms of this kind, and I will therefore conclude this part of my statement with a short reference to the way in which the practical and scientific parts of a complete agricultural education may be best obtained. It is the desirableness of uniting the two that makes institutions of the class of the Royal Agricultural College so valuable. Such institutions should, in my opinion, be not scientific but agricultural colleges. Their purpose, aim, and end are to turn out agriculturists; their business is to teach agriculture—agriculture, certainly, and therefore anything that will throw light on agriculture also. It is, however, difficult, and perhaps impossible, to give that pre-

ponderating importance to instruction in farm practice in any scheme for the arrangement of the time of sixty or eighty young men at an institution of this kind, and therefore I am inclined to think that the best result will be obtained where such colleges receive young men after three or four years' residence upon a farm at home or elsewhere. They would at the College have for a year or two opportunities of becoming acquainted with the sciences, and their relation to the art and business of the farmer, while at the same time the routine of work upon the College farm would keep fresh their familiarity already acquired with the practical details of farming.

A young man of twenty-one or twenty-two about to enter on a farm is unusually well qualified both to make his business answer for himself, and to make it respectable in the eyes of others, who, having up till fifteen or sixteen been well educated at a school, has since that time been resident on a farm, or what is better, been resident on more than one farm, obtaining a practical acquaintance both in the field and in the market-place with all that the farmer orders and his laborers *do;* and who during the last year or two has been at such a college as Cirencester; especially if during all this time upon these farms he has been taking some interest in those sciences taught there to which agriculture is especially related,—and especially, also, I will add, if all along he has also taken a *reasonable* degree of interest in all the social as well as strictly professional duties, occupations, and enjoyments of country life.

Perhaps even now he had better go for a year with a salesman, accountant, or other professional man, and learn by practice the order, economy, and punctuality of a well conducted business before he enters on business for himself. And I do not doubt that, supposing a young man to have no more than £2,500 or £2,600 at his disposal, it will have nevertheless ultimately well answered his purpose, though so much as £500 or £600 has been spent by him if necessary in this way, and his capital thus diminished to this extent.

THE Boston *Cultivator* says: "Let it be a rule of every thrifty farmer that no weed shall be allowed to bloom on his cultivated grounds." The same rule should also be extended to the uncultivated ground —to the corners of fences, stone heaps and other waste places where weeds delight to grow and where they are too frequently allowed to go to seed.

GREASE THE IMPLEMENTS.—A correspondent of the *Prairie Farmer* truly says that the application of grease (unsalted) to plows, cultivators, hoes, spades, &c., would save much labor in scouring. Whenever any implement is to remain unused for a short time, let the grease rag be used at once.

INFORMATION ABOUT MUCK DESIRED.

EDS. GENESEE FARMER:—Will you please jog the elbow of Prof. S. W. Johnson, or some one who will tell us in the *Genesee Farmer*, something more definite and extended about muck. I deem this a matter of great importance generally, as it is certainly to me. I own, in the town of Salem, where I reside, a deposit of muck of many acres in extent, situated at the base of a large hill, and bordered and divided by ridges of gravelly soil, and in one place by a fine fertile alluvium of about twenty acres in extent. The whole area seems once to have been occupied by a lake, as I have been led to believe, by my discoveries in digging wells, the earth seeming to have been deposited in successive layers by the action of water. Some of my muck land is in natural meadow, producing blue joint and other wild grasses. Some of it overgrown with a species of hard hack, as it is called here, and some of it is covered with a thick growth of cedar, fir and spruce. I have also, in the town of Phillips adjoining, a tract of about ten acres, lying near the village, and which was also evidently once a pond. It produces but little grass, but is covered in one part with a growth of hackmetack, in the rest with hard hack, interspersed with coarse grass and wild cranberries. Now, having such a large amount of this material, it will not be thought strange that I should be anxious to know as fully as may be, its exact character, in order that I may go to work more intelligently to avail myself of its benefits. Now I have some views of my own, and have sometimes thought of presenting them to the public through the *Genesee Farmer*. But recollecting that "a little knowledge is a dangerous thing," I have been unwilling to trust my smattering of chemical science, and prefer making inquiries of those who can easily tell me and others what we wish to know on this important subject. It had been my supposition that we were to look for the sources of ammonia only in animal excrements, and the result of animal decomposition. In this I was probably mistaken. But even if not, I imagine that some descriptions of muck must be supposed to contain a considerable quantity of ammonia, especially in the case of ponds filling up, where there would be, for a succession of ages, innumerable insects and water animals, whose excrement and decomposition must furnish a considerable amount. But I leave these remarks, hoping, if you see fit to publish them, that they may elicit from some competent pen the information that is needed.

ALBERT PEASE.

Salem, Franklin County, Maine, June, 1865.

We should esteem it a favor, as we are sure many of our readers would, if Prof. Johnson would give us an article on this subject.—[EDS.

THE EMIGRATION TO AND FROM MARYLAND.

THE Maryland *Farmer & Mechanic* has an article on "The Sale of Maryland Farms," from which we make a few extracts. It says truly:

"One of the most serious questions that is now pressing upon the farmers of the border States for a solution, and which will continue to be a matter of the gravest anxiety, for some time yet to come, is in regard to the change that has so abruptly taken place in the system of labor and its effect upon the tenure of lands. We know that in consequence of the losses sustained by many of the farmers on the Eastern and Western Shores of Maryland, they have offered their estates for sale, being urged thereto either by the necessity of the case or from the distrust of the future. Where the impelling motive is actual impoverishment, with no hope of relief except by realizing the value of what still remains to them, the matter is one which is scarcely open for argument. But where the losses incurred do not amount to a positive disability to carry on the operations of the farm—although, perhaps, on a more limited scale than heretofore—we respectfully urge upon all such to consider well what they are about to do. We know that the social amenities have been terribly shaken by the war; that radical changes have been made so suddenly in the border States as to entirely subvert the old order of things; that individual and neighborhood antagonisms have been generated which time and better counsels and kindlier feelings can alone soften or allay, and that in this disturbed condition of affairs men's minds are perplexed as to what course it is best for them to take, not only to retrieve their shattered fortunes, but also to attain to that calmness and repose of which they stand in so much need. But will the sale of their farms, the disruption of old ties, the abandonment of cherished associations—will those conduce to peace of mind, or tend, in the majority of instances, to promote the temporal benefit of those who have determined upon them? It is no light thing for a man long settled in one place, to surrender up, even for a fair money value, the old homestead to a stranger.

"Where are such men to go? South of the Potomac? Is the state of affairs any better there than it is here? Has not the land been even more devastated by war? Are the people happier? Has not death or affliction, in some form or other, cast a shadow over almost every household in the land? Suppose, instead of moving to the South, they endeavor to build up a new home at the West. There is but very little of government land now to be bought east of Kansas or Iowa. Nearly all the vacant lands of any value are in the possession of speculators. In the new States or Territories field hands are as scarce as they are with us. There is little of what we call society; the roads are bad for the most part; the market for the sale of agricultural produce is at a remote point—schools and churches are scattered wide apart, and the value of the crops when grown and harvested is infinitely less than in the older States where the market is near at hand and the supply is rarely, if ever, in excess of the demand.

"We say then, that, all these things considered, and well knowing that wherever a man may be, he will have to struggle as best he may against adverse circumstances, it is far better that he should fight out his battle of life upon ground that is well known to him, and where he also is known, than to encounter his troubles in a strange region, among a strange people, and without a solitary friend to cheer him with a word of encouragement. The spirit of migration, which appears to be developing itself in certain portions of our State, is much more likely to prove injurious than beneficial to those who indulge in it. If they will but exert the same energy in the management of the farms they now hold that would be required to develop the resources of new lands, at the least they would have no reason to doubt where the balance of advantage would lie after the lapse of a few years."

There is much truth in this last remark. Those who think that less energy is required to obtain the means of a comfortable living in some distant place than where they now are, will, in nine cases out of ten, find themselves mistaken. Those who are selling their farms in Maryland and moving elsewhere, will find difficulties to overcome, perhaps, equally as great as those which now surround them, and those who are selling their farms in this and other sections, and going to Maryland, will also find that there are drawbacks as well as advantages in their new locations. Unless there are grave and solid reasons for the change, it is better to fight out the great battle of life where you now are. This desire to sell farms and move elsewhere is one of the chief reasons why our agriculture does not improve as rapidly as we desire.

DISEASED STOCK.—The Illinois Legislative Assembly has passed a law to "Punish persons for bringing diseased sheep into the State and for suffering diseased sheep to run at large." Any person bringing sheep into the State which he knows to be affected with a contagious disease, is liable to a fine of $100; and any person letting sheep affected with a contagious disease run at large, is liable to the same fine.

KILLING ELECAMPANE.—"P. F." says that the roots will be destroyed by fall plowing the land.

GARDEN WORK FOR JULY.

Excessive heat and drouth are ordinarily the most dreaded contingencies of the gardener this month. The former can hardly do any injury to the garden, but it may drive the gardener into the shade, if he be an amateur, merely, or one whose ordinary avocation is within doors.

The *farmer* will not mind the heat, but I trust that this paper is read by very many who are not farmers, by mechanics, merchants, professional men, gentlemen of leisure, who cultivate their small city or village garden, to supply their table with its luxuries, to obtain healthful exercise, or from a *love* of the occupation.

Such may shrink from the broiling July sun, and begin to neglect their garden at this time, after having kept it in good condition for two or three months.

But they may be assured that if they retire before the sun, the weeds will not, but will flourish, luxuriantly, and may render of no avail much of the past labor, if not kept down. But there is one favorable consideration, the burning sun is a powerful auxiliary in destroying the weeds. Cut them up on a dry hot day, and they will not be likely to take root again.

Moreover, bear in mind always, the benefit plants will receive from stirring the soil in such weather.

If man has not the power to make it rain when he wishes, he has the power to bring the parched earth into such condition that it will drink up the moisture always existing in the atmosphere—and in a greater degree in hot than cold weather—and convey it to the thirsty plants.

No; do not forsake the garden now, but if unable to endure the heat of the mid-day sun, rise an hour earlier in the morning, and dig until the heat becomes insufferable, and then try it again towards evening.

Asparagus.—Has now given place to green peas. Let it rest, only passing over it occasionally and cutting up weeds. Asparagus is destined to occupy the same bed for years, it is important that no weeds be allowed to propagate, or they will eventually overrun and spoil the bed.

Beet.—It is pretty late, but the Early Blood Turnip may yet be sown with a fair probability of maturing.

Beans.—The early sorts may be sown the first of the month for string beans.

Cabbage.—Transplant to fill any vacancies occasioned by removal of early crops.

Celery.—May be transplanted into trenches, made rich, or set upon the surface. In either way the ground should be made mellow and rich.

Carrots.—Keep down the weeds, and sow early in the month the Early Horn.

Cucumbers.—Do not allow cucumbers to ripen on the vines, and plant for pickles.

Melons.—Hurry them up by liberal use of liquid manure. The melon is peculiarly adapted to the system in hot weather, but if neglected it hardly matures in this latitude until hot weather is past.

Peas.—As soon as the early peas are through bearing, they should be gathered and threshed. They are not suitable for seed, as they are generally the cullens of the patch, but are valuable feed for swine or any animal that will eat them.

Potatoes.—Should receive their last hoeing before the vines fall over. If weeds come up afterwards, they should be pulled by hand, and not left to rob the potatoes of moisture and food. In digging new potatoes before maturity for the table, select the hills having the largest and fewest stalks, as they contain the largest tubers. It is wasteful to dig them before they are full grown.

Sweet Potatoes.—Hoe them occasionally, lifting the vines so that they may not become rooted. I received my plants from the nursery of A. M. Purdy, South Bend, Indiana, and although transported over six hundred miles, so carefully were they packed, they arrived in excellent order.

Tomatoes.—Should be ripe about Rochester the latter part of the month. They are too great a luxury to be neglected. If inclined to run too much to vine, cut them back a little.

Turnips.—Sow Improved Ruta Baga, or Yellow Aberdeen, the early part of the month, in drills fifteen inches apart, and Red Top Strap Leaf broadcast the latter part.

SMALL FRUITS.

Grapes.—Will *pay* for a little extra care in thinning out shoots and bunches of fruit.

Raspberries.—Remember that mulching will increase the crop, and prolong the season—particularly if dry. Keep down sprouts not needed for next year's crop, or new plantations, and cut out the old canes as soon as done bearing.

Blackberries.—The same remarks will apply to these as to raspberries.

Strawberries.—Should be cleaned out as soon as

done bearing, and a little fine manure applied to them. As I sit down to tea, with a dish of large, red strawberries "smothered in cream" before me, I can't help thinking how foolish are those farmers, who live on from year to year without any such luxuries in their garden. The life of the farmer engaged, solely, in raising field crops, swine and cattle, is not very enviable, but add to it the beauties and luxuries of the flower, fruit and vegetable gardens, and there are few avocations that have greater attractions.

Plant largely, and if there is more than your family can consume, they make a very appropriate present to your unfortunate city friends, or to your pastor. P. C. R.

GRAPE CULTURE IN AMERICA.

The following extracts, from the recently published report of the United States Census, will be read with interest. They are from the pen of Robert Buchanan, of Cincinnati, Ohio:

In the first settlements on this continent, the grape-vines found indigenous, were esteemed among the most valuable productions. In "Force's Collection of Historical Tracts,"—1620 to 1760—frequent allusion is made by the writers to our native grapes and to the wine made from them. According to Sir John Hawkins, wine was made in Florida in 1564. A vineyard was established in Virginia in 1620, also in 1647. In 1651, premiums were offered in Virginia for the production of wine. In 1664, a vineyard was planted near New York by Paul Richards, and in 1683 and 1685 attempts were made at Philadelphia, but failed. At a later period, Mr. Tasker, of Maryland, and Mr. Antil, of New Jersey, were more successful. These, however, were mere experiments. There is no evidence that wine was produced in any quantity worth naming until the close of the last and the beginning of the present century. About this period vineyards were planted in various parts of the Union, near the cities of New York and Philadelphia; near Lexington and Glasgow, Kentucky; Cincinnati, Ohio; Vevay, Ind.; South Carolina, Georgia and Virginia. These plantings were generally in small vineyards of one to five acres, and, unfortunately, most of them with *foreign grapes*, which, proving to be unsuited to our climate, resulted in failures. Those who planted with native grapes did better. In North and South Carolina, the "Scuppernong wine," from a native grape, soon became famous, and was praised as a home production worthy of American patronage.

At Vevay, Indiana, Dufour and his Swiss settlers adopted the "Schuylkill Muscadel," a Pennsylvania grape, then erroneously called the "Cape." This grape was found to suit the climate, and made a red wine, that soon acquired a fair reputation, and laid the foundation for wine-growing in the west, with the better varieties that succeeded it.

The celebrated traveler, Volney, "tasted wine made from native grapes at Gallipolis, Ohio, in 1796," and Dufour, in 1799, "found a Frenchman at Marietta, Ohio, who made a few barrels of wine every year from grapes collected in the woods, equal to the wine made near Paris." Dufour further remarks:—"None of the different and numerous trials which were made in several parts of the United States that I visited in 1794, were found worthy the name of vineyards. I went to see all the vines growing that I could hear of, even as far as Kaskasia, on the Mississippi, where I was informed the Jesuits had planted a vineyard shortly after the first settlement of the country, but that the French government had ordered it to be destroyed, for fear that vine culture might spread in America and hurt the wine trade of France. I found only the spot where that vineyard had been planted, in a well-selected place on the side of a hill, under a cliff to the north-east of the town. No good grapes were found there or in any gardens of the country."

Dr. Daniel Drake, in an address on "The Early Physicians, Scenery, and Society of Cincinnati," states that "Third street, running near the brow of the upper plain, was on as high a level as Fifth street is now. The gravelly slope of that plain stretched almost to Pearl street. On this slope, between Main and Walnut, a French, political exile M. Mennesieur, planted, in the latter part of the last century, a small vineyard. This was the beginning of that cultivation for which the environs of that city have since become so distinguished. I suppose this was the first vineyard cultivation in the valley of the Ohio." The well-known naturalist, F. A. Michaux, in his travels through the United States in 1802, "visited the vineyard near Lexington and found but one variety of grape—a native, doing well,—the foreign mildewed." The foregoing extracts afford a fair sample of the pioneer efforts in vineyard culture in the west; they were much like those in the east, and wherever foreign vines were planted disappointment and loss resulted. In the South, owing to its genial climate, the experiments were more successful, but most so with native vines. In 1812, I was first cheered by the sight of a vineyard. It was on the south side of a hill at Rapp's German settlement, of Harmony, in Butler Co., Penn. The grapes planted were principally native varieties, the most of them "Schuylkill." Five years later I visited the vineyard of the Swiss colony, at Vevay, Indiana, where the same grape was the favorite. At the former the vines were planted in 1808, at the latter in 1806. The product was a red wine, resembling claret, but rather too harsh for the Ameri-

dan palate. Still it was received with favor as a home production, giving promise of great results in the future.

I now come to a period when the second class of pioneers in this cultivation were more fortunate than their predecessors, and, with other grapes, produced better wines. About the year 1820, Major John Adlum, of Georgetown, D. C., first brought the Catawba into notice as a wine grape, and Thomas McCall, of Georgia, Mr. Herbemont, and other gentlemen of the South, the Warren, Herbemont, Madeira, and other varieties which have since proved so valuable.

To Major Adlum belongs the honor of introducing the Catawba, and so high was his appreciation of this grape, that he wrote to Mr. Longworth, of Cincinnati, that he believed he had conferred a greater favor on his country than if he had paid off the National debt; in which, after a trial of the grape for wine, Mr. Longworth agreed with him.

The memory of the late Nicholas Longworth, of Cincinnati, will ever be held in the highest esteem by the wine-growers of our country, as he was the father of successful vine culture in the West. By a large expenditure in money in his various experiments with both foreign and native grapes, during a period of forty-three years, he at last succeeded in producing sparkling and still wines highly creditable to himself and the country, and the practical knowledge he acquired from year to year was liberally made known through the public prints for the benefit of all.

The late John J. Dufour, of Vevay, Indiana, is also entited to the grateful remembrance of the people of the United States, for his early and persevering efforts in the cultivation of the vine in this country of his adoption. For thirty years succeeding the introduction of the Catawba grape, the large emigration of Germans into the Ohio valley, many of them from the wine districts on the Rhine, furnished practiced and willing vine-dressers, who were glad to have the opportunity of trying their skill in this new country with a grape so promising. Numerous vineyards were planted in the Western States, in localities supposed to be favorable, especially in the vicinity of Cincinnati, and in 1850, Catawba wine, produced in hundreds of thousands of gallons, had acquired a high reputation as a rival of Rhenish wine, and became an article of export to our Eastern cities. The cultivation had spread all over the Western and Southwestern States, and we thought then, as we do now, that wine-growing would eventually be ranked amongst our most important agricultural interests. This the next generation may possibly realize.

Vineyard culture in the United States may now be considered as fairly established. Wine is made in thirty of the thirty-four States of the Union, of different qualities, of course, and with varied success. As to its future production in quantity, I should name, first, California; second, the mountainous districts of the Southern States, as most favorable on account of the climate; third, the Ohio and Mississippi valleys; fourth, the Middle States; and last, the Eastern. As to quality, the best samples have been found in Georgia and the Ohio valley. The impression is, that in the Middle and Eastern States the climate is too cold to elaborate sufficient saccharine matter in the grape to make a wine that will keep without the addition of sugar. But this may prove a mistake—new varieties may yet be produced to suit each section of our country where the grape is grown. They are now numbered by hundreds, and new hybrids are annually added to the lists. After all our experience during the last seventy years, vine culture in the United States is but yet in its infancy, and we have much to learn. The few millions of gallons which we produce annually, are as nothing when compared to the nine hundred millions of France, or the three thousand millions of all Europe. The vineyards of Europe are estimated at twelve millions of acres. We have far more grape territory than that in the United States; but our climate, with the exception of California, is less equable. In California alone, it is stated, there are five millions of acres well adapted to grape culture. Here is something to reflect upon, and to give hope for the future.

CULTIVATION.

Vineyards are usually planted on hills, or rolling uplands; such positions are chosen on account of the natural drainage, which is considered essential Porous soils are preferred to stiff clay, or such as are retentive of water. No trees should be permitted to grow within one hundred feet of the vineyard, nor should any crop be cultivated in it, as the vine is a selfish plant, and demands all the ground for its own use. The ground is prepared for planting by trenching with the spade two feet deep, or by breaking up with a subsoil and common plow 18 or 20 inches; the latter is much the cheapest, and always adopted where the situation of the vineyard permits. In planting the vines, the distance apart in the rows appears to vary in different localities. Around Cincinnati and in the Ohio valley, 3 by 6 is the usual distance; on the shores of Lake Erie, 6 by 8, and 8 by 8; and in California, 8 by 10 is recommended as the proper distance. The object in this country, where labor is dear, is to cultivate with the plow where it can be used, and to avoid the spade, which is expensive. Vineyard-planting is a system of dwarfing the vine, but with our long jointed and rampant-growing native vines it may be an error to plant too close, or to prune too severely. Our Euro-

pean vine-dressers, accustomed to short-jointed vines, naturally fall into that error here, but they are now correcting it.

The method of training also varies with localities. In the Ohio valley and the Southern States the single stake to each vine, and the bow system, is adopted. On the lake shore, and in California, the trellis is used, the vines being trained on it horizontally.

The estimated average annual yield of good vineyards in the West is about that of France—200 gallons to the acre. In the South they claim 500, and in California 800; these latter I consider too high. A bushel of grapes—fifty pounds—will make three and a half gallons of good wine, and a half gallon inferior. In a mere sketch like this article, it is only intended to impart general information on the subject of which it treats. But I may remark, in brief, that a free exposure to the wind, with the bunches of grapes sheltered from the hot sun by the leaves of the vine, tying neatly to the stake or trellis, a judicious shortening in of superfluous branches, and the keeping the ground cultivated and free from weeds, is considered essential.

The grape, like other fruits, has its enemies. The most destructive of these is the mildew or rot. Was it not for this disease, the Catawba would be immensely profitable; but of late years, in the Ohio valley, it has destroyed from one-fifth to four-fifths of the crop in many vineyards, and discouraged some persons from planting that fine grape. A sudden change of weather from hot to cold when the vine is in rapid growth, and the seed in the berries about hardening, is sure to produce rot. A free under-drainage—either natural or artificial—and a full exposure to the wind, will in part prevent it. No system of pruning or cultivation has yet proved a sufficient remedy in vineyards. Vines trained against the side of a house, and under cover of the eaves, seldom, if ever, rot. The disease probably results from atmospheric causes, as the rust in wheat.

Insects have not as yet been found very injurious, but the careful vine-dresser will watch closely, and permit none to get colonized in his vineyard. The frost in some localities kills the young shoots of the vine in April, or early in May, but the twin or latent bud will put out, and yield about half a crop. To prevent serious injury by hail, let the bunches of grapes be well sheltered by the leaves of the vine, which will also prove a protection from the hot sun.

VARIETIES OF GRAPES FOR THE VINEYARD.

These are now quite numerous, and every year adds more to the list. It will only be necessary to name a few of the most popular varieties:

1. *Catawba.*—Nine-tenths of all our vineyards in the West and Southwest are planted with this fine grape. With all its liability to rot, it continues a favorite.

2. *Delaware.*—This hardy and delicious table grape promises to rival the Catawba for wine. It is becoming popular with some of our best cultivators. The wine is light and delicate, and preferred to the Catawba by many good judges. The Delaware is less subject to rot than that variety.

3. *Herbemont* makes an excellent wine, but the vine is not hardy enough to be much planted

4. *Norton's Seedling.*—A hardy, free-growing vine, but little affected by rot, makes a rich red wine like Burgundy, and is becoming quite popular.

5. *Schuylkill.*—This old favorite of sixty years ago is now but little planted. The wine resembles claret when well made, but the vine bears light crops. It is almost free from rot.

6. *Isabella.*—Another favorite of former years that is now but little cultivated for wine. It is deficient in saccharine matter to make still wine that will keep without adding sugar to the must or juice; but the sparkling wine from it is delicious.

The Concord, Hartford Prolific, and some of Rogers' hybrids, appear to suit our climate, and to be free from disease, but are not yet fairly tested for wine. Grapes of recent introduction in high credit for Northern cultivation, are the *Iona* and *Adirondack*, natives of the State of New York, and the *Creveling*, a native of Pennsylvania. In the South, in addition to the Catawba, the Warren is largely cultivated, and the Scuppernong still holds the favorable reputation it acquired sixty years ago. Other varieties are being tested, which it is unnecessary to enumerate here.

MUSTARD TREE OF SCRIPTURE.—A plant of considerable interest was that sent by Mr. Bull, as the Mustard tree of Scripture (*Salvadora persica*), and which was the only species in the genus. He had his doubts, however, whether this plant was really the one alluded to in the parable, for the name of one plant was sometimes in the course of time transferred to another: thus the old Primrose was our Daisy, and the old Eglantine was certainly not our Sweet Briar. Dr. Royle, however, who was the botanist that had bestowed most attention on the plants of Scripture, considered the one before them to be the true Mustard tree. It certainly grew to a tree 20 feet high on the shores of Lake Tiberias, where the parable was spoken; but Dr. Hooker had informed him (Mr. Berkeley) that when in Palestine he saw Sinapis nigra all over the country, that it there grew 10 feet high, and that the Salvadora, on the contrary, was a rare plant; and he (Mr. Berkeley) thought that the balance of evidence was in favor of the Mustard of Scripture being the same as our own.—*Report of Royal Horticultural Society.*

FRUIT GROWERS' SOCIETY OF WESTERN NEW YORK.

The Summer Meeting of this Society was held in the Court House, in this city, June 21st. There was a good attendance of members and others interested in fruit culture, and a creditable exhibition of strawberries, cherries, &c.

Dr. Trimble, of New Jersey, the well known entomologist, was present, and was asked to make a few remarks. He spoke of the fine collection of strawberries on exhibition, and said that Triomphe de Gand succeeded much better here than in New Jersey. This year New York City is well supplied with strawberries. Camden and Atlantic counties, New Jersey, furnished large quantities. He noticed that Wilson's Albany was the variety most extensively grown. The Agriculturist was not fully tested. It is a wonderful strawberry. The berry is tolerably firm, sub-acid, and of remarkable size. It was originated by Mr. Seth Boyden, of Newark, N. J., the well known inventor. He is a remarkable man. Has a small place in the country devoted to strawberries, and the raising of seedlings, &c. He does not leave the fertilizing to chance, but does it in a scientific manner. Mr. Boyden thinks he has now a superior variety to the Agriculturist—the Green Prolific. Dr. T. regretted that the Agriculturist was not called the Seth Boyden strawberry.

Dr. T. also alluded to a remarkable cherry of great size, raised by a French gentleman in his neighborhood. In regard to the Cedar bird, it is true that they take some cherries, but they also eat the canker worm, and if it was not for the birds our trees would be stripped of foliage by this worm, as is the case in New Haven.

The committee appointed to name subjects, made their report, which was adopted, and the meeting discussed them as follows:

Question 1. *What are the best six varieties of strawberries for private use?*

H. E. Hooker would prefer Large Early Scarlet to Jenny Lind. Triomphe de Gand proves its high quality this year. Russell's Prolific so nearly resembles the old McAvoy's Superior that it hardly deserves a distinctive name. It produces more perfect berries, but it requires plenty of staminate plants as a fertilizer. Berries are too soft, probably softer this season than usual on account of the wet weather. Did not think we had much of an acquisition in it. Would include it in a list for family use, but did not place it so high as some others.

Mr. Maxwell, of Geneva, liked the Triomphe de Gand; also, Wilson's Albany, when very ripe. Preferred the Large Early Scarlet to Jenny Lind as an early berry. Thought more of Russell than Mr. Hooker appeared to do. Had seen it very productive, with good culture and when well fertilized by the Wilson.

Charles Downing preferred the Jenny Lind to Early Scarlet as a table berry.

Mr. Ellwanger agreed with Mr. Hooker as to varieties, and would add the Red and White Alpine for family use; and also Burr's New Pine, on account of its quality.

Mr. Fisher, of Batavia, said the Wilson, Triomphe de Gand and Hooker were the principal kinds cultivated in his neighborhood.

H. J. Brooks thought we should discard varieties that have no other merit than size. We should prefer those of high quality. We can raise strawberries cheaper than we can buy sugar. His first choice would be Triomphe de Gand, Hooker and Early Scarlet.

Mr. Crane said his first choice was Burr's New Pine. It is rather a shy bearer.

Mr. Downing said the only objection to it was its small size. It is desirable to have berries of good size on account of the labor of picking.

President Barry thought it was very desirable to get *early* kinds. We all know how good the first dish of strawberries tastes. Would not like to give up Large Early Scarlet. Jenny Lind is sweeter, but is not quite so productive.

Mr. Bronson, of Geneva, was somewhat disappointed with the Russell. It produces prodigious crops, but the berry is too soft, and this wet season begins to rot before it is fully ripe. It required a staminate variety to fertilize it. Thought high of the Triomphe de Gand. The Agriculturist is a variety of great promise.

Charles Downing thought the Agriculturist will prove a valuable berry on account of its size and high flavor. It is very productive.

Mr. Hoag, of Lockport, was somewhat disappointed in the Russell. It is a pistalate and needs a fertilizer. It is not the same kind, but closely resembles, McAvoy's Superior. The quality of the berry is good, but it is too soft. Named Triomphe de Gand, Hooker, Wilson, Early Scarlet and Jacunda. The latter appears to be as productive as Triomphe, and is of large size.

The members were asked to ballot for the best six varieties of strawberries for family use. There thirty-three votes cast, of which

Triomphe de Gand received,	30	Brighton Pine,	5
Early Scarlet,	26	Jenny Lind,	4
Russell,	23	Crimson Cone, (for canning,)	3
Wilson,	23	Agriculturist,	3
Hooker,	22	Longworth's Prolific,	2
Hovey,	8	Austin,	2
Burr's New Pine,	12	Bartlett,	2
Trollope's Victoria,	5	Buffalo,	2

Red Alpine, White Alpine, Cutter's Seedling, Jacunda, Snow Flesh, Jenny's Seedling, Autumn Jaland, Alpine and Genesee received *one* vote each.

Question 2. *Which are the best strawberries for market?*

Mr. Keech, of Waterloo, spoke highly of the Agriculturist for market. Superior to all others.

Mr. Wright, who has had considerable experience in growing strawberries for market, said he found Triomphe de Gand and Wilson the most profitable sorts.

Question 3. *What are the best six varieties of raspberries for general cultivation?*

H. E. Hooker named Brinkle's Orange, Hudson River Red Antwerp, Franconia, Knevitt's Giant, Hornett and Black Cap.

Mr. Langworthy asked Mr. H. if he could not include the Philadelphia.

Mr. Hooker had understood that it was not equal to those named in quality.

Mr. Downing named the Orange, Franconia, (for cooking,) Hudson River Antwerp, Clarke, (a new variety, originated, we believe, at New Haven,) Vice President French, and Fastolf. Philadelphia is similar to the Purple Cone raspberry.

The President asked Mr. Downing what variety was most extensively cultivated for the New York market.

Mr. Downing replied, the Hudson River Antwerp. He knew of one town near where he resided which sold $110,000 worth last year. A raspberry plantation will last for ten years, and is more profitable than the strawberry.

Mr. Thomas said a large raspberry grower told him that the labor of covering the canes in winter, pruning, &c., was fully equal to the labor required in setting out new strawberry beds, and that the latter was fully as profitable as the raspberry.

QUESTION 4. *Is there any practicable remedy for the currant worm?*

Dr. Trimble was called upon, and said *he had never seen the worm?*

Mr. Crane succeeded in killing them with Hellbore powder. Only one application was needed.

Mr. Thomas succeeds with white hellbore.

Mr. Frost mixed hellbore and lime in equal parts, (for the purpose of distributing the hellbore.) In twenty-four hours not a worm is left.

Mr. Barry had used hellbore in solution with excellent effect,—half a pound in a pail of water and syringed the bushes with it.

Mr. Harris said he believed he was the first person who recommended hellbore. Had used it for years. It is an effective remedy when properly applied. But he thought on a small scale the worms might be kept under by going over the bushes early in the season, and killing the flies and the eggs on the leaves. At first the flies deposit their eggs on the suckers and lower branches. The former should be cut out, and hundreds might be destroyed in this way. If any are hatched put on hellbore.

QUESTION 5. *What insects and diseases are grapes liable to be attacked by during summer?*

Dr. Trimble exhibited the leaves of grapes affected by a caterpillar which eats them in holes, and also devours the fruit. It is a serious enemy in the cities, where there are no birds. In the country, where there are birds, this caterpillar does little damage.

Charles Downing said his grapes were troubled with thrip.

Dr. Trimble said a strong solution of tobacco would destroy the thrip. He mentioned a case where a hot day (100° in the shade) killed the thrip by the thousand.

Mr. Fisher said that last year he had fine Delaware grape vines that gave promise of producing a splendid crop, but the vines were so affected with thrip that he did not gather a single bunch.

Josiah Salter said that what was called thrip was really "fritters"—the small white fly so common on rose leaves. Tobacco smoke will kill them where it can be confined. A solution of tobacco and whale oil soap applied with a syringe is also an effectual remedy.

QUESTION 6. *Is there any new light on the subject of pear blight?*

Joseph Harris was called upon and said he had no *new* information to communicate. He still adhered to his former opinion that the blight was caused by a fungus developed in the soil from decaying woody matter, such as the roots of former trees, chip manure, &c.

Several members argued that this could not be the cause of the blight, inasmuch as the disease generally affected the leaves and branches first, descending to the trunk as the disease spread. If it was caused by anything at the roots it was reasonable to suppose that the trunk would be affected before the branches.

[We may remark that this objection is about as reasonable as it would be to contend that indigestion in the stomach could not produce headache, because no pain was felt in the intermediate points—the heart, shoulders, neck, mouth, nose, eyes, &c. If the tree was a dead piece of wood the objection would be a valid one. But when it is borne in mind that the idea is, that the fungus decomposes the sap, it will not seem improbable that those parts of the tree where the growth is more rapid should be affected before the trunk. If poison was introduced with the sap at the roots of a tree, its effects would be first observed in the leaves and branches.]

QUESTION 7. *Do the Seventeen Year Locusts attack fruit trees?*

Hugh T. Brooks said that in Livingston county he was informed that they had destroyed the leaves of apple trees near an oak forest, where they appear to be most numerous.

Mr. Thomas said they were very numerous near Union Springs. Kept up one continual, uniform war. *They never eat leaves.* They puncture the twigs of trees for the purpose of depositing their eggs, and when the twigs are small the hole which they make kills the twig. But they never *eat* anything while above ground.

Dr. Trimble confirmed this statement. They remain above ground about three weeks depositing their eggs. This is all the damage they do. The eggs will hatch about the 11th of August. They then drop down and burrow into the earth, and attach themselves to the roots of trees. There was a difference of opinion as to whether they were injurious to the trees. It was a common remark that "a locust year was always a good fruit year," which may be owing to the fact that the locusts are not at the roots.

Mr. Thomas did not think they did any harm. Had known an instance where an apple orchard was cut down shortly after the last appearance of the locusts, seventeen years ago, and yet they came out this year from the spot in great numbers—showing conclusively enough that if they suck the sap from the roots of trees, they are at all events able to do without such food.

QUESTION 8. *Is the man who allows the caterpillar to multiply in his apple orchard a good neighbor?*

Mr. Crane said he should vote an emphatic "*nay.*"

Dr. Trimble would go further. Such a man was not only a poor neighbor—he was a *nuisance.* He hoped this Society and every Agricultural and Horticultural Society in the land would agitate the question till we had a policeman in every town who would bring such a man to justice!

Among the fruit exhibited were forty-three dishes of seedling strawberries raised by the Messrs. Moore, of Brighton, several of which the committee thought possessed decided merits. Ellwanger & Barry showed fifteen varieties of strawberries. Among the newer sorts that were particularly fine, were Belle Artesienne, Bonte de St. Julienne and La Constance. H. E. Hooker & Co., Bronson, Graves & Selover, J. H. Babcock, H. N. Langworthy, Ira A. McCall and others, also exhibited strawberries.

Young People's Page.

ANECDOTE OF DR. NOTT, OF UNION COLLEGE.

On an evening preceding Thanksgiving many years ago, two students left the college, with the most *foul* intent of procuring some of the Doctor's fine fat chickens, that roosted in a tree adjoining the house. When they arrived at the spot, one ascended the tree, while the other stood with the bag ready to receive the plunder. It so happened that the Doctor himself had just left the house, with the view of securing the same chickens for his Thanksgiving dinner. The rogue under the tree hearing some one approaching, immediately crept away, without notifying his companion among the branches. The Doctor came up silently, and was immediately saluted from above as follows:

"Are you ready?"

"Yes," responded the Doctor, dissembling his voice as much as possible.

The other immediately laying his hands on the old rooster, exclaimed:

"Here's old Prex, will you have him?"

"Pass him along," was the reply, and he was soon in the Doctor's bag.

"Here's marm Prex," said the all unconscious student, grabbing a fine old hen, "will you have her?"

"Yes," again responded the Doctor.

"Here's son John, will you have him?" "Here's daughter Sal, take her?" and so on until he had gone regularly through with the Doctor's family and chickens.

The old man walked off in one direction with the plunder, while the student, well satisfied with his night's work, came down and streaked it for the college. Great was his astonishment to learn from his companion that he had not got any chickens, and if he gave them to any one it must have been to Doctor Nott. Expulsion, fines and disgrace were uppermost in their thoughts until the next forenoon, when both received a polite invitation from their President, requesting the presence of their company to a Thanksgiving dinner. To decline was impossible, so with hearts full of anxiety for the result, they wended their way to the house, where they were pleasantly received by the old gentleman, and with a large party were soon seated around the festive board. After asking a blessing, the Doctor rose from his seat, and taking the carving knife, turned with a smile to the rogues and said:

"Young gentlemen, here's old Prex, and marm Prex, son John, and daughter Sal," at the same time touching successively the respective chickens; "to which will you be helped?" The mortification of the students may be imagined.

How can a man, who has no wings, be said to be 'winged,', in an "affair of honor?" Because, in going to fight a duel, he makes a goose of himself.

Why do the patent laws tend to promote discovery? Because they tax invention.

A SOUTHERN UNION GIRL.

The following story, from Albert Richardson's narrative of his adventures in Southern prisons, will be read with no little interest:

"We galloped along at Dan's usual pace, with the most sublime indifference to roads—up and down rocky hills, across streams, through swamps, over fences—everywhere but upon public thoroughfares.

"I suppose we had traveled three miles, when Mr. Davis fell back from the front, and said to me:

"'That young lady rides very well; does she not?"

"'What young lady?'

"'The young lady who is piloting us.'

I had thought Dan Ellis was piloting us, and rode forward to see about the young lady.

"There she was surely enough. I could not scrutinize her face in the darkness, but it was said to be comely. I could see that her form was graceful, and the ease and firmness with which she sat on her horse would have been a lesson for a riding master.

"She resided at the Union house, where Dan had gone for news. The moment she learned his need, she volunteered to pilot him out of that neighborhood, where she was born and bred, and knew every acre. The only accessible horse (one belonging to a rebel officer, but just then kept in her father's barn), was brought out and saddled. She mounted, came to our camp at midnight, and was now stealthily guiding us, avoiding farm-houses where the rebels were quartered, going round their camps, evading the pickets.

"She led us for seven miles. Then, while we remained in the wood, she rode forward over the long bridge which spanned the Nolechucky river, to see if there were any guards upon it; went to the first Union house beyond to learn whether the roads were picketed; came back, and told us the coast was clear. Then she rode by our long line toward her home. We should have given her three rousing cheers, had it been safe to cheer. I hope the time is not far distant when her name may be made public. Until the rebel guerrillas are driven out from their hiding places near her mountain home, it will not be prudent."

"Bill, give me a bite of your apple, and I will show you my sore toe." Bill did it, for such an overture could not be resisted.

When has a scruple more weight than a drachm? When conscience makes a teetotaller refuse a thimbleful of brandy.

Why is a comet more like a dog than the Dog-star? Because the comet has got a tail and Dog-star hasn't.

When does a lady drink music? When she takes her piano for-te (tea.) Did you ever?

Where are we most likely to find the sky blue? The nearer we get to the milky way.

Answer to Puzzle.—"Madam."

Ladies' Department.

A FEW HINTS ON FASHIONS.

A NEW style of hairdressing is about to be introduced. The front hair and the lower part of the back are cut short, and this short hair is curled and frizzed. The rest is smoothly drawn back and turned under as if to be caught in a net. It is, however, kept in place by five fillets or bands of velvet, which pass over the head from side to side, and are sewed to a band passing under the back hair. This is a Grecian style and extremely pretty. Another style has the aureole of short curls with a long curl behind each ear; the back hair is braided and arranged quite on the top of the head. Instead of the plait a bunch of curls is sometimes substituted, which must also be quite high on the head. The hair is still arranged in a waterfall or Grecian at the back, and very high rolls or Pompadour in front. Bunches of short curls are much worn over the parting in front, also a row of light curls over the waterfall at the back.

With a change of coiffure comes a change in the shape of bonnets, and we are told that these pretty, becoming and comfortable little half-handkerchiefs are to be discarded to give place to a bonnet with high, wide face, and hood-shaped Quaker-like crown. Loud will be the complaints against these bonnets, which we can hardly imagine becoming, and to ladies not favored with height, they will be positively frightful. We hope, however, the change may be very gradual, and that it may be long before Fashion obliges us to wear so voluminous a head gear.

The present bonnets are small, indeed so scant are some of them as not to be seen at all from the front, and just touching the waterfall at the back.

A tuft of flowers with a few loops of illusions is all that is required.

Other styles are made up of French muslin drawn over colored silks and trimmed with ribbon. These are also very pretty. White illusion over shirred silk is also one of the fashionable styles.

Most of the dress skirts are good, and Mme. Demorest's method of goring is as follows: Fold over six inches on each side of the upper part of the front breadth, graduating this down two-thirds of the skirt, baste this down. The next breadth set one inch below at the bottom, and sew the straight edge to the bias line of the front breath. Fold a gore of eight inches on the farther side of this breadth, and so continue all round the skirt, setting each breadth one inch below at the lower edge. By this method you have a handsomely gored train skirt without cutting up the material. A plain skirt should also have each breadth set one inch longer at the bottom and then trimmed off to form a train. In plaiting, lay one large treble box-plait in the centre of the back, and the rest in flat plaits all alike toward the front. Gored skirts are plaited in clusters of two or three plaits laid deep with a space between. A box-plait in the back and four clusters are sufficient for a skirt.—*Godey's Lady's Book.*

DOMESTIC RECEIPTS.

Contributed to the Genesee Farmer.

CURRANT JELLY.—Pick fine red and large ripe currants from the stems, bruise them and strain the juice from a quart at a time through thin muslin, pressing it gently to get all the liquid. Put a pound of white sugar to each pound of juice; stir it until it is all dissolved; set it over a gentle fire; let it become hot and boil for fifteen minutes; then try it by taking a spoonful into a saucer. When cold, if it is not quite firm enough, boil it for a few minutes longer. It may be made by standing in the sun, without boiling, if put in a very warm place, and is generally of a much better color than when cooked by the fire.

RHUBARB WINE.—Dr. Marsh, of the United States Sanitary Commission, gives the following receipt for making rhubarb wine: Peel and slice as for pies; put a very small qantity of water in the vessel, only just enough to cover the bottom; cover the vessel and gradually bring to a slight boil; then strain, pressing out all the liquid; to this liquid add an equal quantity of water; to each gallon (after mixed) add from four to five pounds of brown sugar; set aside, ferment and skim like currant wine; leave in the cask and bulk as long as possible before sending away. All wine is better kept in casks.

RASPBERRY VINEGAR.—Take three or four quarts of raspberries, put them in a stone crock and cover them with vinegar. Let them stand twenty-four hours. Then strain this juice through a jelly-bag and pour it on to fresh berries, letting this stand another day. Repeat this process until you have the quantity you desire. Add to each pint of juice one pound of sugar Put it into a preserving kettle and allow it to heat sufficiently to melt the sugar. When it is cold, put it into bottles. It will keep several years.

CURRANT WINE.—One quart of currant juice, two quarts of water, three pounds of crushed sugar, and to each gallon of the mixture add one gill pure brandy. Place a cask upon its side with the bung up, and fill it entirely. It will require replenishing, as it wastes by fermentation, and the cask should always be kept full.

WINE OR CIDER SAUCE FOR PUDDINGS.—One cup of sugar and two tablespoonfuls of butter. Beat up thoroughly like hard sauce. Stir in gradually, just before using, a quarter of a glass of wine. Set it in a pan of hot water until softened, and when turned out it will be white and smooth like cream.

STRAWBERRY WINE.—Press out the juice from the strawberries, and add two quarts of water to each quart of juice. Loaf sugar is then added at the rate of one pound to the gallon. Put into a barrel in a cool cellar, and ferment in the usual way.

WEST POINT CAKE.—One pound of sugar; one pound of flour; one-half pound of butter; five eggs; one cup of sour cream; one teaspoonful of pearlash.

The Wool Market.

The price paid for wool in this section is about fifty cents per pound, and we hear of some large clips that have been sold at this figure, but as a general rule farmers are not disposed to sell at this price, and the market is quite dull.

We were conversing a few days since with one of the most intelligent and experienced wool dealers of this section, and the arguments he used in favor of a lower price for wool than last year, are these:

1st. There is from ten to twenty per cent more old wool in the hands of farmers than usual.

2d. The new clip is nearly twenty per cent larger than last year.

3d. There is an unusually large quantity of foreign wool in the market.

4th. The scarcity of cotton and high prices have stimulated the production of wool all over the world.

5th. There is more cotton now in the South than was anticipated.

6th. Nearly all the foreign wool is imported at a duty of only three cents per pound.

7th. With gold at par, the manufacturers can import foreign wool for fifty cents per pound.

We asked him what were the arguments on the other side. *He did not know of any!* But of course there are some.

1st. Although there is unquestionably a larger amount of last year's wool in the hands of farmers than usual, and though the new clip will be twenty per cent higher than the average, still it is admitted the production of American wool is very far short of the ordinary consumption.

2d. During the war there has been a great increase in the number and extent of woolen factories, and they are still actively engaged and are likely so to continue.

3d. Though the demand of woolen goods for army purposes will not be as large, yet the "boys" who are coming home, will not be likely to wear their thread bare uniforms for any length of time. They will want new clothes and they have the money to pay for them.

4th. It is true that "the manufacturers made the tariff." But still there is a duty on wool worth over twenty-four cents per pound, but which has been reduced by admixture of dirt, &c., to eighteen cents, or nine cents a pound, payable in gold. Now such a duty on wool reduced so that three pounds is only equal to one, would have to pay a duty of twenty-seven cents in gold, which at 140 is equal to 37½ cents currency.

5th. Though there is undoubtedly much cotton in the Southern States, very little has been brought to market, and the price is still very high and is likely to continue so for some time.

6th. Gold is still at 140, and if foreign wool cannot be imported for less than fifty cents in gold, this would be equal to seventy cents in currency. But so far as we can ascertain, foreign wool of good quality cannot be obtained for fifty cents in gold.

It appears to us that the price of wool will depend almost entirely on the price of gold. In other words, the price at which foreign wool can be imported fixes the price of domestic wool, and as the former is paid for it in gold, the price of wool will depend pretty much on the price of gold. Were it certain that gold would keep up to 140 for the next six or eight months, we feel sure that the manufacturers would buy our wool freely at 70@75 cents per pound. The money market is easier than it has been since 1861, and this will favor the purchase and holding of wool.

As we stated last month, the Ohio Wool Growers' Association voted to hold their wool at eighty-five cents. We are inclined to think this is too high. We think 65@70 would be nearer the mark for ordinary domestic fleece.

New Advertisements.

Among the valuable articles advertised in this number of the *Farmer* we would call particular attention to Hickok's Cider Press, manufactured by W. O. Hickok, of Harrisburgh, Pa. Also to Cook's Evaporator for making sorghum sugar, manufactured by Blymyer, Bates & Day, of Mansfield, Ohio. It is the best apparatus of the kind we are acquainted with.

The "Horse Fetters," advertised by Joseph Briggs, of New York, we have not seen, but presume they are good, and they are certainly a useful thing on a farm.

Haines & Pell, the well-known agricultural implement dealers and manufacturers of New York, offer their valuable Mowing Machine, Horse-Rakes, &c., at "reduced prices." Send for one of their circulars.

J. M. Thorburn & Co., of New York, offer a fine list of turnip and other seeds wanted at this season. There is no better or more reliable seed house in America.

The Markets.

In this section the crops are unusually good. The wet weather of the last few days it is thought will rust the wheat badly, and the midge will probably injure it considerably, but however bad this may be for individual farmers, it can scarcely affect prices to any material extent.

Prices will be determined on the demand for breadstuffs in the Southern States and in Europe, and on the price of gold. The latter still keeps up to 140, and this will give us prices forty per cent higher than would otherwise be the case. Freights, too, to Europe are unusually low, and this is also favorable. We think prices *in gold* will be higher than they were last year, and it is thought that the growing ease in the money market will keep up the price of gold.

A Beautiful Picture.

We have received from the publisher, W. J. Holland, of Springfield, Mass., an exquisite engraving entitled "The Child's Prayer," which we cannot too highly commend to our readers. See advertisement in this number of the *Farmer*.

Notes on the Weather from March 1, 1865, to June 1, 1865.

JANUARY and FEBRUARY were cold months, giving us a temperature considerably below the general average. No part had been so cold as we have often known, and only once below zero; but the whole had been uncommonly cold.

March gave us a change, and the mean was above the general average 2.3°. The sleighing had been good, and a large body of snow was on the ground. This began rapidly to melt, and just after the middle of the month by rain and heat still more rapidly. By the 17th the Genesee Valley Canal was overflooded by the rise of the Genesee, and the south and west part of the city was flooded. The flood increased till noon of the 18th, when its desolation was terrific. Since the flood, it is easy to recall the great damage suffered by our city. Spring came on rapidly in the last half. The mean heat of the month was 36.8°, and its general average 32.4°.

Not much snow fell in the month; but the water of snow and rain measured 3.17 inches. The soft maples and common elms flowered about the middle of the month, and fully in the last week.

April was still warmer. In the first half the mean was to the general average as 47.3° to 41.2°, and in second half as 47.9° to 44.1°, making the month quite warm, and advancing the season rapidly. The early flowering plants and the grass and wheat were forward and very promising. Considerable wind; a thunder shower on the 6th at 10½ to 11 P. M. Water in the month 3.03 inches; frost on the 17th. Rain, hail, and snow near midnight of the 24th. Early cherries in flower in the yards on the last week. Shod-blow in blossom, and hard maple also on 25th.

The means of the heat of April range from 37.6° to 52.9°, while the general mean for twenty-nine years is 44.1°, and for this April is 47.9°, or 3.8° above the general average. Only once in twenty-nine years has April given a higher mean temperature—in 1844.

May was a little cooler in proportion in its first half, but the heat of the month was greater than the general mean as 57.1° to 56.3°. The cool winds from the cold Lake Ontario have been considerable, and May has not seemed quite so pleasant. The season has not advanced so much in proportion. Indian corn was in good part planted, though the rains have left considerable of it to be yet done. Still, the grass and wheat show that harvest must be somewhat earlier. Lilacs blossomed on the 16th. Apples, pears, plums, were then in flower; peaches gone. Rain in the month 3.30 inches. Fine thunder shower on 21st at 5 to 6 P. M. Water of the spring months 9.50 inches.

Ice-bergs in the passage to England in the middle of May. Hotter weather at the South.

Hottest day in May, 16th, 73°; hottest noon, 83° on 17th; coldest day 42° on 11th and coldest morning, 38° on 12th.

Spring has had a good reputation. The prospects from gardens and fields are fair and joyous. Good is the prospect wide over the land.

Inquiries and Answers.

BACK VOLUMES OF THE GENESEE FARMER—PRICE OF WOOL, &C.—This is the first year I have taken the *Genesee Farmer*, and I should like to know whether you have the back volumes for sale. If so, I would like to purchase them after I sell my wool. *Will wool keep down in price?* I like your "Walks and Talks on the Farm." I frequently get more information from one of these talks than from the —— —— —— and the —— —— in their four issues for the month.—JOSEPH KEWING, *Adrian, Ohio, May* 19, 1865.

We can furnish you the six last volumes of the *Genesee Farmer*, (1859, '60, '61, '62, '63 and '64,) substantially bound, with an index to each volume, for $5.00.

In regard to the price of wool, it is not safe to predict. There is unquestionably a large stock in the hands of farmers, but as the premium on gold still continues high, and is likely to continue so for some time, and as we shall not get a full supply of cotton for a year or two at least, and as there is a high duty on foreign wools, it would seem that wool ought to bring at least 50 per cent. more than its average price before the war, when gold was at par, cotton abundant and cheap, and we were importing a large quantity of foreign wool at low duties. Of course there will be a great effort to keep down the price till the new clip has passed out of the hands of the farmers; and as the wool-dealers have lost heavily on last year's purchases, they will not be inclined to buy so largely the present season. Still money is abundant, and wool is an article that will keep. It is always a safe rule to hold anything that will keep, when the price falls below the cost of production.

MILDEW ON GOOSEBERRIES.—Would you be kind enough to inform me through your paper of a remedy for mildew on gooseberries. Also, if there is a way for raising tomatoes very early without making hot-beds, as they seem to produce more vines than fruit? By answering the foregoing, you will much oblige—MRS. JOHN MILLER, *Galt, C. W.*

We know of no certain remedy for mildew on the gooseberry. In this section, the culture of the fine English varieties has been pretty much abandoned, on account of their liability to mildew. Good culture and mulching in summer are the most approved preventives. We think, too, that sulphur scattered on the bushes before the mildew makes its appearance, or *immediately* afterwards, would have a good effect. The mildew on the gooseberry and the mildew on the grape belongs to the same species, and as sulphur is a *certain cure* for the latter, it is highly probable that it will at least check the former. We hope Mrs. M. will try it.

We have never had much success in raising early tomato plants without a hot-bed. Sowing them in a box of light soil, and keeping them in a moderately warm room, with as much sunshine as possible, promises the best success. When the plants are well started, and become too crowded in the box, they should be transplanted into small flower pots, or into other boxes. Keep the leaves well sprinkled, as the great difficulty of growing plants in a room is the dry atmosphere.

SUPERPHOSPHATE FROM BONES.—I have a lot of raw bones which I am very anxious to use on turnips the coming summer, if there is any way that I can dissolve them. If you can tell me how to do it, you will greatly

oblige me. I suppose they may be dissolved with sulphuric acid, but do they not sustain a great loss by being burned first?—C. A. WHITAKER, *Hancock, N. H.*

Yes, you lose half the value of the bones by burning. Bones contain gelatine equal to about five per cent. of ammonia. This is all driven off and lost. And even after you have burnt the bones, you cannot make a *good* article of superphosphate without grinding the burnt bones. Neither can you make a good superphosphate from raw bones without first grinding them. There are those who say they have succeeded in dissolving large bones, but we have never seen a good article produced in this way. If there is no mill where you can get them ground, you had better crack them up by hand and put them under grape vines, dwarf pear trees, &c., and buy a barrel or two of superphosphate for your turnips.

TURNIP DRILL.—You speak highly of a system of drilling turnips on ridges, and mention a drill that will sow two rows at a time, drilling in superphosphate, plaster, &c., at the same time. Now if you know where such a drill is made, I should like to obtain one. Do you think it is better to sow on ridges or on the flat?—BUCKEYE.

Such drills are made in Canada, but we have not, as yet, been able to ascertain the name of the manufacturer. Where several acres of turnips are grown, such drills are indispensable.

We think it is better to sow on ridges. Of course they should be rolled down before the seed is sown. The drill alluded to has a roller in front of the seed sprouts, and a lighter one behind for covering the seed. One of the advantages of sowing on ridges, is that the horse-hoe can be used nearer the plants than when drilled in on the flat. In the latter case, the young plants are liable to be smothered by the soil thrown on to them by the cultivator.

Literary Notices.

THE YOUNG GARDENER'S ASSISTANT. By THOMAS BRIDGEMAN. New York: WILLIAM WOOD & Co. 1865.

Even when the theory of gardening is well understood, a novice in the practice finds himself often at a loss for the counsel of some person who has experienced the same difficulties and has found a way out of them. This book is intended to fill just that place, and does it as well as a book can. The author is a practical man, and tells in a simple way precisely what a "young gardener" wishes to know. It treats of almost every subject on which information is needed for the successful culture of the kitchen and flower garden. We have examined it particularly with reference to vegetables, and in that department it is an exceedingly valuable, practical work. A table is given of all the ordinary vegetables, showing whether they are hardy or tender, whether the seeds are slow or quick in germinating, capable or not of being transported, and whether moisture or heat is most essential to their growth. A list of seeds is given, with the amount of space that an ounce or a pound will sow—information very valuable to persons who for the first time are ordering their seeds. The directions for forcing are excellent, though they apply rather to the climate of New Jersey than the more northern winters of Western New York; but as the author gives his standpoint, it is easy to make the necessary changes for a colder season.

The flower garden occupies a considerable space, and orchard and fruit management is also treated on. The monthly calendar is very good, and gives many useful hints.

SERMONS ON ABRAHAM LINCOLN: With the Funeral Services at Washington. Boston: J. E. TILTON & Co.

This little volume contains thirty-four sermons by different divines of Boston on that sad occasion. No book expresses better the sentiment of the North than this. It is well worth reading, as nearly all the sermons were preached under the immediate influence of the painful excitement attending the melancholy event.

INSECTS ENEMIES OF FRUIT AND FRUIT TREES. By ISAAC P. TRIMBLE, M. D. New York: WILLIAM WARD & Co.

This is a most valuable treatise on the curculio and apple moth—subjects vital to the interests of every fruit-grower, and who now is not a fruit-grower? As the author says: "The health of your trees and your crops of fruit depend upon how successful you are in subduing the Insect enemies. If they are conquered, all who plant trees and manage them with reasonable care can have fruit." And in no way can this victory be rendered certain except by a thorough acquaintance with the habits of the insects, from the worm to the moth, and back to the moth again.

The author of this work has studied the habits of the insects treated of, most faithfully and minutely. His directions for destroying them are not empirical, but are founded on the basis of a thorough scientific knowledge. He does not even insist that his way is the best, but only that it is one way which, in his own case, has always proved successful—leaving each person to draw their own conclusions from the facts which he so accurately states. The illustrations are numerous and well drawn, adding much to the value of the book.

ADVERTISEMENTS.

A FEW short advertisements of interest to farmers—and only such—will be inserted in the GENESEE FARMER at twenty-five cents a line, or $2.50 per square, or $25 per column, each insertion, payable in advance.

HALL'S AGRICULTURAL WORKS,

Rochester, N. Y.

THE undersigned, Executors of the estate of Joseph Hall, deceased, will continue to manufacture the celebrated

HALL THRESHING MACHINE AND POWER,

which for execution and style of workmanship stands unrivalled Also,

Collin's & Shattuck's Combined Clover Machines,

the easiest running machine made, capable of threshing, hulling and cleaning at one operation.

☞ For information apply by letter or otherwise.

P. W. GLEN, } Executors.
M. E. HOLTON, }

Rochester, N. Y., June 26, 1865. jy1t

SAWING MACHINES.

WE are building a GREATLY IMPROVED CROSS-CUT SAWING MACHINE for cutting logs into stove wood, with two or four horse powers to drive them.

Also, a new style CIRCULAR SAW for cutting cord wood into stove wood.

☞ Circulars describing our machinery sent promptly on application by letter. Write to JONAS W. YEO, Proprietor Robinson Machine Works, Richmond, Ind.

$125 A MONTH!—Agents wanted everywhere to introduce the improved Shaw & Clark $90 Family Sewing Machine, the only low price machine in the country which is licensed by Grover & Baker, Wheeler & Wilson, Howe, Singer & Co., and Bachelder. All other machines now sold for less than forty dollars each are infringements, and the seller and user are liable to fine and imprisonment. Salary and expenses, or large commission, allowed. Illustrated circulars sent free. Address SHAW & CLARK, Biddeford, Maine. jn 3t

CIDER PRESS SCREWS.—Five feet long, four inches diameter. These powerful screws bring out a third more juice than portable presses. Send for a circular. Made by THOMPSON & CARPENTER, Poughkeepsie (N. Y.) Foundry. ju2t

THE CHAMPION.

HICKOK'S PATENT PORTABLE KEYSTONE CIDER AND WINE MILL.

12,000 in Use and all Approved.

THIS admirable machine is now ready for the fruit harvest of 1865, is made in the most admirable manner with either one or two tubs, and is well worthy the attention of all persons wanting such a machine. It has no superior in the market, and is the only mill that will properly grind grapes.

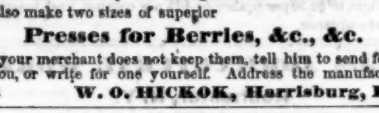
For Sale by all Respectable Dealers.

I also make two sizes of superior

Presses for Berries, &c., &c.

If your merchant does not keep them, tell him to send for one for you, or write for one yourself. Address the manufacturer,

jy4t **W. O. HICKOK, Harrisburg, Pa.**



New Patent Animal Fetters.

JUST the thing that farmers need for fettering Horses, Mules, and cattle, when turned out to pasture, to prevent jumping, running, escape, or damage. They are made of malleable iron, light, strong, and not liable to get out of order.

Price, $2 50. Dealers in Hardware and Agricultural Implements, &c., please forward their names for full description and prices to the trade by the dozen, to

JOSEPH BRIGGS,
jy-4t 335 Broadway, New York.

A PARTNER WANTED.

OWING to advancing years and increasing business, the senior partner of a well established and popular Nursery wishes to retire and put in his place an active, practical Nurseryman, who can bring letters of credit for industry, sobriety and honesty. To such a person an opportunity is offered rarely to be met with, as no money will be required (if desired,) until the profits of the business will furnish it.

For particulars inquire of

DeGRAFF NELSON & CO.,
Fort Wayne, Ind.
June 15, 1865. jy

THE BEST AND CHEAPEST FARMING LANDS IN THE WHOLE WEST, ARE THOSE OF NORTHERN MISSOURI.

REBELS are moving away, and are selling for whatever they can get. An extensive immigration from the Northern States and from Europe already begun, will soon occupy that part of the State and develop its immense natural wealth. Free and full information given on application to

nov'64-1y ELI THAYER, 1 Park Place, New York.

PIONEER SORGO MACHINERY.

COOK'S EVAPORATOR.

8000 IN USE. All Warranted.

NOT ONE Returned.

First Prize at Thirty-five State Fairs.

"SIMPLE affair. Operates admirably. The best apparatus." *American Agriculturist.*

"Of all the Evaporators we have seen, the most satisfactory results are from Cook's.—*Prairie Farmer.*

We manufacture PANS for BRICK ARCHES (on the Cook principle) at about one half the price of the Evaporator.

SORGO HAND BOOK sent free.

Parties wishing the agency for the Cook Evaporator and the Clark Sorgo Machine Co.'s Mills, should direct to our address.

BLYMYER, BATES & DAY,
MANSFIELD, OHIO.

THE "VICTOR" CANE MILLS.

TRIUMPHANT AT STATE FAIRS.

Only Mill with National Reputation.

DIAGONALLY BRACED—LAPPED GEARING—OIL-TIGHT STEP BOXES, FLUTED FEED ROLL—FLANGED MAIN ROLL—NO KEYS USED.

"New principles are introduced, by which the choking is prevented, and one-third of the power saved. The operation was very striking—one horse pressing one-fourth more cane, bringing out the bagasse dryer, and gaining one-sixth in revolution over the other Mills driven by two horses. The committee awarded it the FIRST PREMIUM.—(At the Ohio State Fair.)—*Cleveland Leader.*

We also manufacture all sizes of HORIZONTAL MILLS. Our Mills embrace no less than eleven different patents, which cover about every excellence attainable in a Mill.

Illustrated pamphlet sent free.

CLARK SORGO MACHINE CO.,
jy1t 116 Main street, Cincinnati, Ohio.

SUPERIOR FARM LAND!—20,000 ACRES AT LOW PRICES AND ACCOMMODATING TERMS.—Franklinville Tract, Gloucester county, New Jersey, 25 miles south of Philadelphia on railroad running from Philadelphia and Camden to Cape May. In lots to suit purchasers. Circulars, with reports of SOLON ROBINSON, HON. WM. PARRY, and others, with full information, sent free, by addressing JOHN H. COFFIN & CO., Franklinville, Gloucester county, New Jersey. Also, improved Farms from 20 acres upward. ap6

BEECHER'S PATENT VENEER FRUIT BASKET.

AFTER one season's thorough trial of the VENEER FRUIT BASKET, we offer it to the trade with the full assurance that nothing of the basket line now in market can compete with it in its adaptability to the wants of fruit-growers. For durability and style our Basket has no superior, and for strength and cheapness no equal.

For circulars of description, &c., address

feb6t A. BEECHER & SONS, Westville, Conn.

$70 A MONTH!—I want Agents everywhere, at $70 a Month, expenses paid, to sell Fifteen Articles, the best selling ever offered. Full particulars free. Address OTIS T GAREY, Biddeford, Maine. ju 3t

REDUCTION
IN THE PRICES
OF THE
UNION MOWING MACHINE.

4 Feet Machine from $170 to $145.
4 1-2 " " " $190 to $170.

SULKY HAY-RAKES.

CLEMENT'S HORSE HAY-FORK.

HARVESTING TOOLS

Of all kinds constantly on hand.

HAINES & PELL,
27 Courtlandt Street,
NEW YORK.
jy2t

THE LITTLE GIANT MICROSCOPE!

IS A NEW MAGNIFIER, of high power, for the examination of Living or Dead Insects, Flowers, Seeds, Minerals, and thousands of other objects, and can be carried in the pocket or attached to a watch-chain. Price, $1.

Beautiful Mounted Objects, $1 per box.

Sent, prepaid, on receipt of price. Liberal terms at wholesale. Address GEORGE MEAD, Thompsonville, Racine County, Wisconsin.

Also, the new and beautiful folding

POCKET STEREOSCOPE,

which makes pictures look large and life-like. Price, $2. Choice Stereoscopic Views, $3 per dozen. Sent everywhere, prepaid. jy3t

Only Thirty Cents

WILL PURCHASE a sure and effectual means for taming the

MOST VICIOUS HORSES.

Also, a thoroughly approved method for taking GAME and FISH.

Many successful trials have proved the above to be NO HUMBUG.

Send to J. B. WILLIAMS,
jy1t Bradford, Vt.

SUPERPHOSPHATE OF LIME,
BONE DUST AND MEAT AND BONE COMPOST.
MANUFACTURED BY
TASKER & CLARK,
Cor. 8th and Washington Sts., Philadelphia.

THE manufacturers offer their Superphosphate to the public confident that it will be found equal to any similar article now in the market. Being made from finely ground bones (not burned), Peruvian guano, and other ingredients having manurial properties, it has been found a superior fertilizer for wheat, grass, &c., &c. Price $65.00 per tun at the factory.

MEAT AND BONE COMPOST.—A valuable manure from refuse meat, bones and other offal from the slaughter-house. Price $40 per tun.

BONE DUST—Very fine and pure at $65.00 per tun.

☞ Terms Cash. Address as above.
feb1t TASKER & CLARK, Philadelphia, Pa.

TURNIP CULTURE.

Rhodes' the Standard Superphosphate,
CANNOT BE EXCELLED
FOR THIS IMPORTANT CROP.

B. M. RHODES, & CO., 82 South street, Baltimore.
H. E. MORING, General Agent New York and New England,
my3t 113 Water street, New York.

Old Eyes Made New

WITHOUT SPECTACLES, DOCTOR OR MEDICINE.

Pamphlet mailed free on receipt of ten cents. Address E. B FOOTE, M. D., No. 1130 Broadway, New York. ju 4t

By Mail, Post-paid.

SEEDS SUITABLE TO THE PRESENT MONTH.

TURNIP SEED.

J. M. THORBURN & CO.,
15 John Street, New York,

OFFER THEIR PURE AND SELECTED Stock of Turnip Seed by mail, postage prepaid, at the following rates:

EARLY WHITE DUTCH	per oz., 10 cts.;	per lb.,	$1.
GERMAN TELTOW	" 20 "	"	2.
RED TOP STRAP LEAF	" 10 "	"	1.
ENGLISH WHITE GLOBE	" 10 "	"	75c.
" " NORFOLK	" 10 "	"	75c.
LONG WHITE FRENCH	" 10 "	"	1.
" " TANKARD	" 10 "	"	1.
YELLOW STONE	" 10 "	"	1.
GOLDEN BALL, extra fine	" 10 "	"	1.
YELLOW ABERDEEN	" 10 "	"	1.
YELLOW FINLAND	" 20 "	"	2.50.
DALE'S HYBRID	" 10 "	"	75c.
IMPROVED RUTA-BAGA	" 10 "	"	1.
SKIRVING'S do	" 10 "	"	1.
LAING'S do	" 10 "	"	1.

TRADE PRICE LIST of the Above, for Dealers, just published.

ALSO,

Corn Salad	per oz. 15 cts.,	per lb.	$2 00
Pepper Grass	" 10 cts.,	"	75
White Spined Cucumber	" 15 cts.,	"	1 50
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Kohl-Rabi (fine Vienna)	" 40 cts.,	"	5 00
White Cabbage Lettuce	" 40 cts.,	"	4 00
Nasturtium	" 40 cts.,	"	4 00
Early Tom Thumb Peas	per quart,		50
Scarlet Turnip Radish	per oz. 15 cts.,	"	1 50
Yellow Summer Radish	" 15 cts.,	"	1 50
Black Spanish Radish	" 15 cts.,	"	1 50
Scarlet Chinese Winter Radish	" 30 cts.,	"	4 00
Round Spinach	" 10 cts.,	"	75
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NEW ILLUSTRATED CATALOGUE.
ROCHESTER CENTRAL NURSERIES.
SEND FOR A CATALOGUE
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SPECIAL TERMS OF SALE,
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ORDER YOUR TREES DIRECT.

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COURSES OF AGRICULTURAL INSTRUCTION—Including the Practice of Agriculture and Horticulture, Agricultural Chemistry and Physiology, Principles of Breeding and Feeding, Injurious Insects, Rural Economy, Forestry, French and German Languages, &c.,—

Open September 13th, 1865.

For detailed Programme, apply to
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Sheep Wash Tobacco

I hereby certify, that I have been familiar with all the processes employed by the South Down Company in the manufacture of their "Sheep Wash Tobacco," and that the article prepared under Mr. Jaques' Patent contains all the useful principles of the Tobacco in a concentrated form.

This Paste, employed as a Sheep Wash, according to the directions furnished by the Company, has the effect of curing Scab and other cutaneous diseases, and destroying all parasitic insects which infest the skin and wool of the Sheep, and thereby improves the health of the animal, as well as the quality of its fleece. Employed in the same way, the solution being made stronger, it will destroy those insects which infest the skins of larger animals, and also those that are injurious to vegetation.

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☞ Wool Growers should beware of any preparation that contains "sulphur," as it is sure to destroy the fibre of the wool. One pound of *Extract Tobacco* will make twelve gallons Wash, and contains the strength of eight pounds of Tobacco, as prepared by farmers.

Agents wanted in every Wool District.
JAMES F. LEVIN, *Agent South Down Co.*,
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*** Farmers, preserve this advertisement, and ask your storekeepers to keep the Wash for sale. A liberal discount to the retailers. feb9t

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THIS SCIENTIFIC and SELF-TEACHING system, which is being ordered by the thousand and sent to every part of the Union, consists of nearly one hundred copies on self-explaining card-board copy slips, and will guide the learner to an elegant command of the pen without schools or teachers. Terms, postpaid to all parts of the Union, **$1.50.** Terms to Teachers and Clergymen, **$1.**

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"Babbittonian Penmanship is far in advance of all other systems. 1st. It is more scientific. 2d. It gives a more complete elementary discipline. 3d. It is more beautiful. 4th. It is more practical."—*R. M. Boggs, formerly Spencerian Penman.*

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GOLD MEDAL

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WE are manufacturing one of the most successful Two-Rowed Planters now in use. One man and horse can plant either in rows or checks from 10 to 12 acres per day, and do the work well. The machine is easily managed, and is of light draft for one horse. It is one of the greatest labor-saving machines of modern invention. Patented August 14th, 1860.

The demand for this Planter has continued to increase, until scores of them are now in use in Western New York, Michigan and Canada West.

Cash price at the Factory, $25.00, subject to alteration as stock and labor may require.

Please order early. Several orders came too late last year to be filled.

Orders with cash will receive prompt attention. A liberal discount made to merchants and agents.

For further description, send for circular.

ap5t WHITESIDE, BARNETT & CO., Brockport, N. Y.

TILE MACHINE.

THE BEST MACHINE IN AMERICA. Send for a Circular containing description. A. LA. TOURETTE,
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The Best Railway THRESHING MACHINE IN AMERICA.

THE Horse Power that is unequaled for ease of team, amount of power, and has never failed to take the

First Premium Over All Its Competitors,

wherever tested. The Combined Thresher and Cleaner that

CLEANS EQUAL TO ANY FANNING MILL,

fit for mill or market.

THRESHERS, SEPARATORS, Fanning Mills, Wood Saws, Seed Sowers, Planters, &c.

All of the best in market. Send in orders early, as we are governed by "first come, first served."

☞ For price and description send for Circulars, and satisfy yourself before purchasing. R. & M. HARDER,
ju 2t Cobleskill, Schoharie Co., N. Y.

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Nos. 14 & 16 *Green Street, Ground Floor,*

NEAR CORNER OF STATE STREET,

Albany, N. Y.,

HORACE L. EMERY, Sole Proprietor.

THE subscriber takes pleasure in announcing that after an absence from the city and country of nearly two years, he has returned and assumed the entire interest in and to the Stock, Business and Interests of the ALBANY AGRICULTURAL WORKS, situated on Hamilton, Liberty and Union Streets, and also of the AGRICULTURAL WAREHOUSE AND SEED STORE on State Street, and continues the business of the same solely upon his individual account and management. He has greatly improved and increased his facilities for manufacturing, and is better than ever prepared to supply all articles in his line, of a superior quality and upon the most reasonable terms.

He has also REMOVED the entire Stock and Fixtures of the WAREHOUSE AND SEED STORE from the old stand in State Street, up stairs, to Nos. 14 & 16 GREEN STREET, and replenished the stork of Implements and Seeds, with the best of its kind, all of which he offers to the public upon the most reasonable terms.

Having been the pioneer in the business of introducing, manufacturing and selling of improved Agricultural Machinery and Implements and Seeds in this city, and devoted twenty years here to the business, he solicits a continuance of the liberal patronage heretofore enjoyed by him and his successors in these Works and business. HORACE L. EMERY,

Sole Proprietor and Manager of the Albany Agricultural Works, Warehouse and Seed Store, Hamilton, corner Liberty and Union streets, and Nos. 14 and 16 Green street, near corner State street, Albany, N. Y. ju 2t

"Cayuga Chief Mower and Reaper,"

WITH

"YOUNG'S IMPROVEMENTS,"

FOR 1865.

Manufactured ONLY by

BARBER, SHELDON & CO.,

Auburn, N. Y.

Examine closely before buying, as there are others building the Cayuga Chief without "YOUNG'S IMPROVEMENTS."

☞ Send for Descriptive Pamphlet.

sp4t BARBER, SHELDON & CO., Auburn, N. Y.

BASS BARK.

WE CAN FURNISH BASS BARK, PREpared for budding, of excellent quality, for 30 cents per lb., or $25 per 100 lbs. Cash orders solicited.

THOMAS & HERENDEEN,
ju2t Macedon, Wayne Co., N. Y.

BAUGH'S

RAW BONE

SUPER-PHOSPHATE OF LIME.

BAUGH & SONS,

MANUFACTURERS AND PROPRIETORS,

Store No. 20, South Delaware Avenue, Philadelphia.

REDUCTION IN PRICE.

After this date, June 12th, the price of BAUGH'S RAW BONE PHOSPHATE will be reduced to $60 per 2000 lbs. (3 cents per pound) packed in good bags and barrels and delivered free of portage to any wharf or depot in this city.

SEND IN THE ORDERS EARLY.

Already the indications point to a very heavy trade in our article for the fall season, and although we have immense facilities for meeting a large demand with a prompt supply, we would strongly advise Farmers and Dealers to give us their orders as early as possible.

BAUGH'S RAW BONE PHOSPHATE

has now been before the Agricultural community for many years under ONE NAME and ONE PROPRIETORSHIP, and needs no further commendation than that accorded to it everywhere, in the continued and successful use by practical and discriminating farmers. Manufactured only by

BAUGH & SONS,

No. 20 South Delaware Avenue,

PHILADELPHIA.

☞ We recommend Farmers to purchase of their nearest Agricultural Dealer. jy2t

1865. 1865.

"16 years established in N. Y. City."
"Only infallible remedies known."
"Free from Poisons."
"Not dangerous to the Human Family."
"Rats come out of their holes to die."

"Costar's" Rat, Roach, &c., Exter's,

Is a paste—used for RATS, MICE, ROACHES, BLACK and RED ANTS, &c., &c., &c., &c.

"Costar's" Bed-Bug Exterminator,

Is a liquid or wash, used to destroy, and also as a preventive for Bed-Bugs, &c.

"Costar's" Electric Powder for Insects,

Is for MOTHS, MOSQUITOES, FLEAS, BED-BUGS, INSECTS ON PLANTS, FOWLS, ANIMALS, &c.

☞ Sold by all Druggists and Retailers everywhere.
☞ ! ! ! BEWARE ! ! ! of all worthless imitations.
☞ See that "COSTAR'S" name is on each Box, Bottle, and Flask, before you buy. HENRY R. COSTAR.
☞ PRINCIPAL DEPOT, 482 BROADWAY, N. Y.
☞ Sold by all Druggists in Rochester, N. Y. jy3t

U. S. 7-30 LOAN.

THIRD SERIES,

$230,000,000.

By authority of the Secretary of the Treasury, the undersigned has assumed the General Subscription Agency for the sale of United States Treasury Notes, bearing seven and three-tenths per cent. interest, per annum, known as the

SEVEN-THIRTY LOAN.

These Notes are issued under date of June 15th, 1865, and are payable three years from that time, in currency, or are convertible at the option of the holder into

U. S. 5-20 Six per cent.

GOLD-BEARING BONDS.

These bonds are now worth a handsome premium, and are exempt, as are all the Government Bonds, *from State, County and Municipal taxation, which adds from one to three per cent. per annum to their value*, according to the rate levied upon other property. The interest is payable semi-annually by coupons attached to each note, which may be cut off and sold to any bank or banker.

The interest at 7.30 per cent. amounts to

One cent per day on a					**$50**	**note.**
Two cents	**"**	**"**	**"**	**"**	**$100**	**"**
Ten	**"**	**"**	**"**	**"**	**$500**	**"**
20	**"**	**"**	**"**	**"**	**$1000**	**"**
$1	**"**	**"**	**"**	**"**	**$5000**	**"**

Notes of all the denominations named will be promptly furnished upon receipt of subscriptions.

The Notes of this Third Series are precisely similar in form and privileges to the Seven-Thirties already sold, except that the Government reserves to itself the option of paying interest in gold coin at 6 per cent., instead of 7 3-10ths in currency. Subscribers will deduct the interest in currency up to July 15th, at the time when they subscribe.

The delivery of the notes of this Third Series of the Seven-Thirties will commence on the 1st of June, and will be made promptly and continuously after that date.

The slight change made in the conditions of this THIRD SERIES affects only the matter of interest. The payment in gold, if made, will be equivalent to the currency interest of the higher rate.

The return to specie payments, in the event of which only will the option to pay interest in Gold be availed of, would so reduce and equalize prices that purchases made with six per cent. in gold would be fully equal to those made with seven and three-tenths per cent. in currency. This is

THE ONLY LOAN IN MARKET

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GREAT POPULAR LOAN OF THE PEOPLE.

Less than $300,000,000 of the Loan authorized by the last Congress are now on the market. This amount, at the rate at which it is being absorbed, will all be subscribed for within four months, when the notes will undoubtedly command a premium, as has uniformly been the case on closing the subscriptions to other Loans.

In order that citizens of every town and section of the country may be afforded facilities for taking the loan, the National Banks, State Banks, and Private Bankers throughout the country have generally agreed to receive subscriptions at par. Subscribers will select their own agents, in whom they have confidence, and who only are to be responsible for the delivery of the notes for which they receive orders.

JAY COOKE,

SUBSCRIPTION AGENT, *Philadelphia.*

May 13, 1865.

"Now I lay me down to Sleep."

PAINTED BY HOLFELD,

AND ENGRAVED BY

A. B. WALTER.

IS NOW READY FOR SUBSCRIBERS.

From many notices of this engraving, we select the following:

[From R. W. A. Stearns, President of Amherst College.]

Your lovely picture, so suggestive of tender memories, can hardly fail to encourage that early habit of prayer which all good men realize as indispensable to a worthy life. I hope it may have an extensive circulation, and bring blessings to many a Christian home.

[From Rev. Ray Palmer, D. D., Albany, N. Y.]

Thanks for the "Child's Prayer" so admirably represented to the eye. A glance at it is enough to carry one nurtured in a Christian home, back to his mother's knee. The picture is happy in conception and beautifully executed. One can almost hear the "Now I lay me down to sleep," etc., in the sweet and tender tone of childhood. It is well to bring the aid of art to the enforcement of the lesson of early piety in this impressive and unexceptional way. I trust that many a family may enjoy the benefit of this picture as a daily monitor.

[From Joseph Cummings, President Wesleyan University, Middletown, Conn.]

The "Child's Prayer" is a beautiful picture, suggestive of tender, elevating, and refining influences and associations. It should be popular, and is worthy of a place in every family.

[From Rev. John T. Pressley, D. D., Alleghany, Pa.]

The "Child's Prayer" is a picture of singular beauty and loveliness. While as a production of art it is a fit ornament for the parlor. As a moral instructor it deserves a place where it may engage the attention of every household. We have here presented to our view a most lovely object, in the most interesting attitude. And while the contemplation of it cannot fail to minister pleasure to the cultivated taste, it is well adapted to awaken in the mind appropriate moral reflections.

[From Rev. Wm. M. Paxton, Pittsburg, Pa.]

I take great pleasure in expressing my admiration of the picture, the "Child's Prayer," which you were kind enough to send. It is certainly a very fine piece of art, and the more I study it the more I feel its moral power. I shall have it framed and placed where my children can see it just as their eyes open in the morning, and as they close at night. The educational influence of such a picture is inestimable, and I should be glad to see one in every family.

[From Rev. I. C. Pershing, Pres. Pittsburg Female College.]

A beautiful picture, embodying one of the simplest and yet one of the most sublime verses in the English language. Such works of art link the beautiful and the good, and bring home and heaven near to each other. To the little ones of every family it is worth a thousand fold its cost. It is worthy a place in every household.

[From Rev. S. D. Phelps, D. D., New Haven, Conn.]

I am greatly pleased with the exquisite and beautiful engraving of the "Child's Prayer." The subject is one of interest in every household, calling forth the sweetest sympathies, and awakening the tenderest recollections. It is an admirable and charming picture, and must carry a sacred and sunny influence into every room whose wall it may adorn.

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